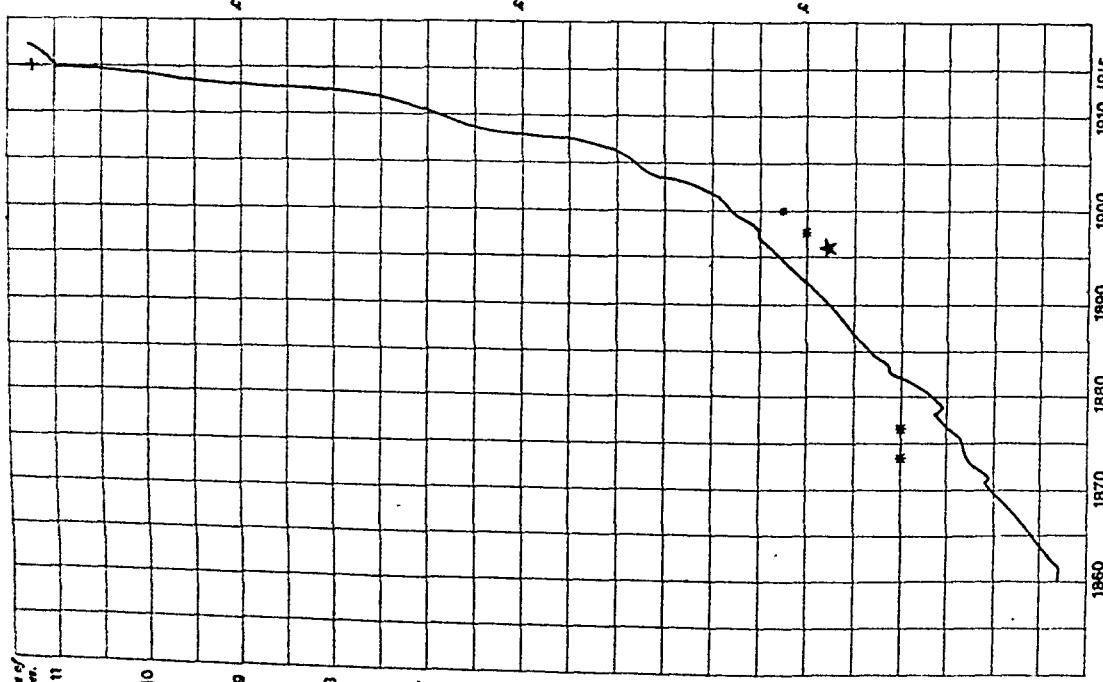


Total number of pupils under instruction in India.

* Farming
 ★ Commencement of Plague
 + Native States omitted

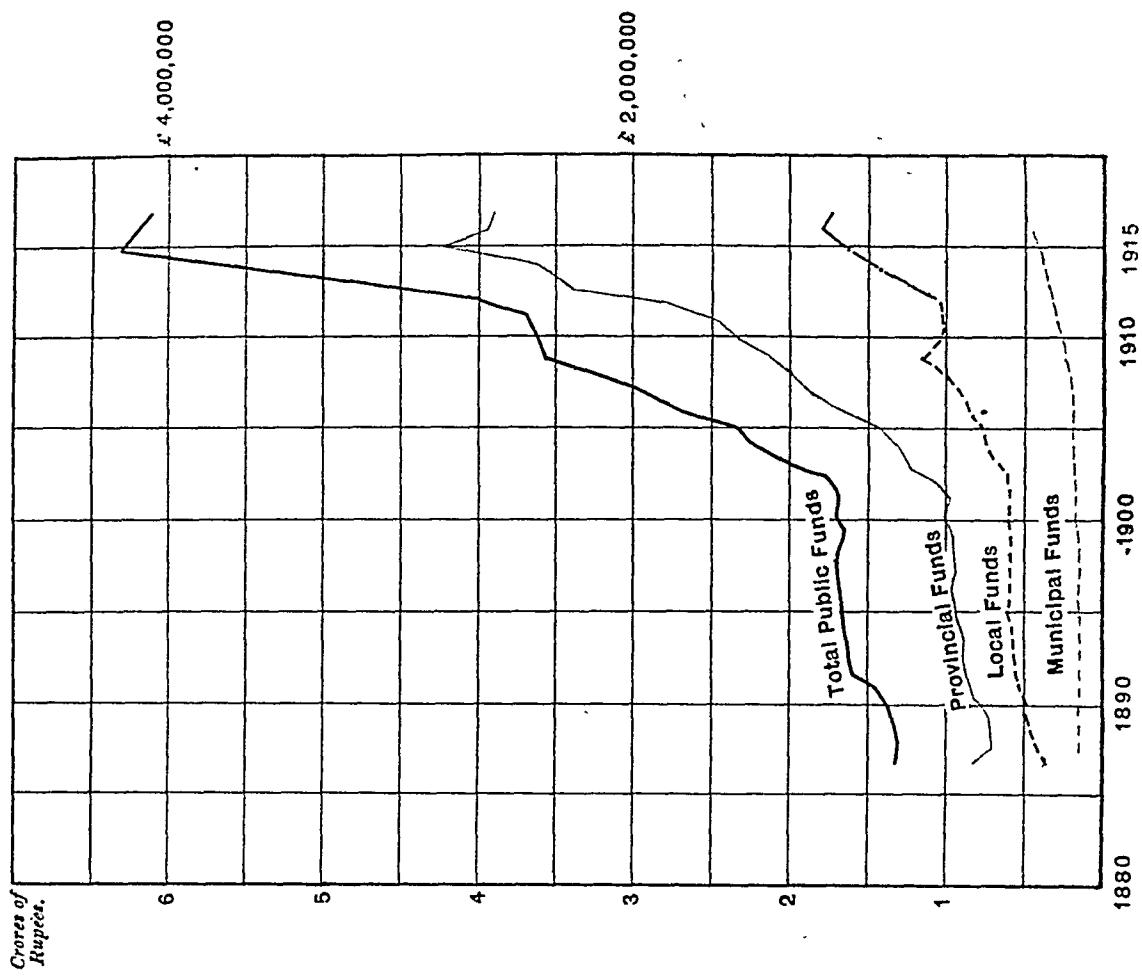
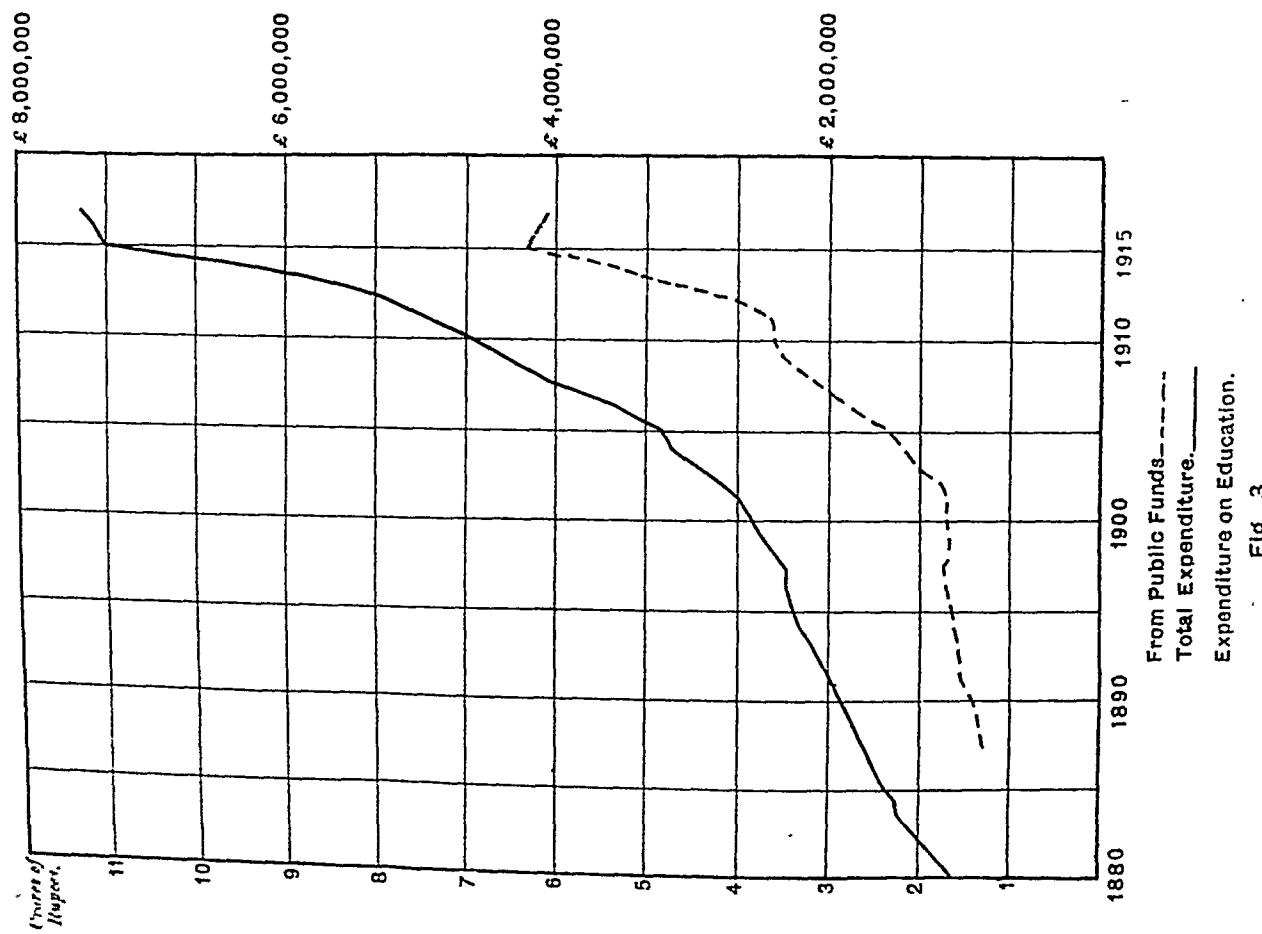
Fig. 2.



Expenditure on Education in India

* Farming
 ★ Commencement of Plague
 + Native States omitted

Fig. 1.



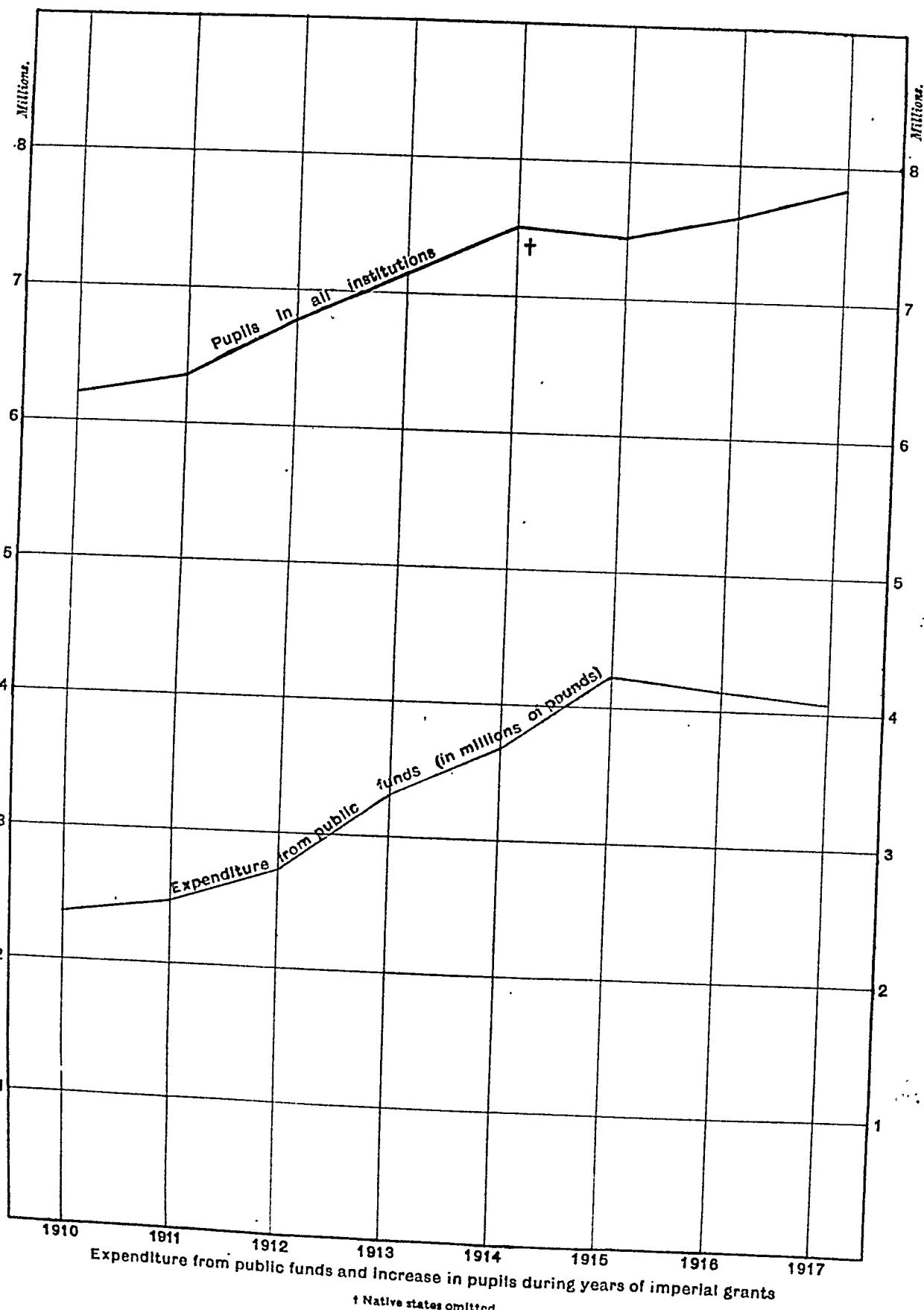


Fig. 5.

PROGRESS
OF
EDUCATION IN INDIA

1912—1917

BY
H. SHARP, C.S.I., C.I.E.

SEVENTH QUINQUENNIAL REVIEW

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INTRODUCTION.

The production of an elaborate report at the present time requires some justification. This volume reviews the progress in education of more than 244 millions of people over a period of five years. It treats of the systems which exist and the different developments which have taken place in fifteen provinces or administrations each of which has its own characteristics. It endeavours to condense the reports received from those provinces and from universities—reports which aggregate some 1,260 pages of letterpress, exclusive of statistical tables and appendices. More than this, it deals with a subject the interest in which has been stimulated by the war in this as in other countries, and which has here assumed a peculiar significance owing to the pronouncement made on the 20th August 1917, by His Majesty's Secretary of State for India. In a country where little more than three per cent. of the population is undergoing instruction, the promise of responsible government as a goal and of a substantial instalment thereof as an early step, at once raises education into the position of a factor of more than ordinary importance. It is necessary to take careful stock of the position. Though every endeavour has been made to curtail the narrative and though the review is shorter than any of its predecessors, the stock-taking has proved a lengthy business.

Endeavour has also been made to issue the report in good time, and before the figures have fallen out of date. Various causes have conspired to delay its publication. One of the university reports was received only on the 27th May 1918. The printing has been delayed by the strain of work in the press. Nevertheless, there seems reason to hope that the distribution will take place at least not later than in normal years, and possibly earlier.

The period reviewed is from the 1st April 1912 to the 31st March 1917. The area and population are slightly less than those dealt with in the previous review. The figures of certain Native States, previously included, are now omitted and the description is confined to those portions of India which are styled British India, *i.e.*, those directly administered by the British Government. At the same time figures for three administrations (Ajmer-Merwara, Baluchistan and the station of Bangalore) have been added.

With slight modifications of the chapter arrangement, the plan of the review generally follows that of its predecessors. Some of the appendices, which appeared not to be of general interest, have been omitted from volume II. Some new facts and figures have been collected—concerning the distribution of building expenditure, mission schools and contributions, the finances of local bodies, municipal institutions, the pay of teachers not in government employ, secularised indigenous schools, etc. This has entailed some additional labour on the compilers of provincial reports, to whom my gratitude is due.

The reports on which the present review is mainly based are the work of the following officers:—

Madras	Mr. R. G. Grieve, M.A.
Bombay	The Hon'ble Mr. J. G. Covernton, M.A., C.I.E., F.R.N.S.
Bengal	The Hon'ble Mr. W. W. Hornell, M.A., C.I.E.
United Provinces	Mr. J. J. W. Allsop, I.C.S.
Punjab	The Hon'ble Mr. J. A. Richey, M.A.
Burma	Mr. S. W. Cocks, M.A.
Bihar and Orissa	The Hon'ble Mr. J. G. Jennings, M.A., assisted by Mr. G. E. Fawcett, M.A.
Central Provinces	The Hon'ble Mr. A. I. Mayhew, M.A.
Assam	Mr. F. W. Südmersen, B.A.

INTRODUCTION.

North-West Frontier Province	Mr. L. Tipping, M.A.
Coorg	Mr. R. M. Savur, B.A.
Delhi	Written in the office of the Chief Commissioner, on information supplied by the Inspector of schools, Ambala Division.
Ajmer-Merwara	Mr. E. F. Harris, B.A.
Baluchistan	Mr. J. R. Cornah, M.A.
Bangalore	Mr. S. A. Steele, B.A.

Reports were also received from the five affiliating universities. The all-India general tables were compiled, as usual, in the office of the Director of Statistics. The sections on education in medicine, agriculture, forestry and veterinary science were prepared, the first by the Director General of the Indian Medical Service, the others under the supervision of the Revenue and Agriculture Department. They were slightly modified and curtailed in harmony with the remainder of the report.

I have to thank the various authorities, especially the directors of public instruction, who have looked through the proofs of most of the chapters and added valuable facts and suggestions. I also acknowledge the assistance received from the Bureau and the zeal with which Mr. G. R. Kaye, F.R.A.S., the Curator, has supervised the statistical work and the other heavy tasks connected with the production of the review.

PROGRESS
OF
EDUCATION IN INDIA
1912—1917

CHAPTER I.

CHARACTERISTICS OF INDIAN EDUCATION.

1. The prevailing system of education in India is partially founded *Growth of the present system.* upon the indigenous system which existed in the country before the consolidation of British power. But it will be seen from what is said at the commencement of chapter II of the sixth review that even the elementary or vernacular schools have undergone considerable modification and expansion since the time when Mr. Adam wrote his reports on education in Bengal and Bihar.* As to higher education, its scope and character underwent a total change when Raja Ram Mohan Roy inveighed against the Sanskrit system of education as useless and Macaulay wrote his Minute of 1835. From that time Sanskritic and Islamic lore largely gave place to western science and thought. The spirit of the times did not encourage the East India Company to undertake any responsibility for the education of the territories which they ruled. The Directors' Despatch of 1854 first recognised and indicated the duties of government and their limits and laid the foundations on which Indian education has since been built. The Education Commission of 1882, the Indian Universities Commission of 1902, the Resolutions of 1904 and of 1913 modified the policy to suit the exigencies of a later period but preserved the original outlines demarcated in 1854.

2. In a country where physical and climatic conditions vary so greatly *General unity* as in India and which contains so large a variety of races, it is inevitable *formity and variations.* that different provinces should gradually develop different systems of *provincial administration and therein of instruction.* One of the great difficulties connected with writing any review of education in India is the variety of detail which characterises the provincial systems. Nevertheless the policy of 1854 has in its main features withstood the influence of place as well as of time, and, under a number of codes and systems which at first sight appear perplexingly varied, it is possible to discern the same essentials of structure. Were this not the case, the tables which form the second volume of this review and the statistics which figure in the narrative itself could not have been compiled. It is not pretended that the same designation of a school or of a course connotes precisely identical characteristics in every province. But on the whole the terms used in one province answer fairly to those which are used in another and it is possible to institute comparisons and contrasts of sufficient accuracy. Any attempt to impose over the whole of India a single iron-bound system would be doomed to failure. The central government confines itself to the consideration of educational problems in their broadest

* These are to be found in an edition compiled by the Reverend J. Long (Calcutta, 1868). This book is difficult to obtain. Much interesting information founded on Adam's reports is contained in Vol. II of the Calcutta Review, 1844.

aspect, to large financial matters and similar subjects. Each province has built up and administers its own system.

Control.

3. The question of control is fully dealt with in chapter IV. Local Governments have departments of public instruction. These administer, carry out inspection and provide the staff for the small number of government institutions. But education is mainly in the hands of local bodies (rural boards and municipalities), associations and individuals. This is in accordance with the definite policy of government, pursued since the despatch of 1854. In some provinces the control exercised is very light and nowhere is there any law compelling either a child to attend school or a teacher to take out a licence. The authority of government is shared, as regards higher education with the universities, as regards lower with the local bodies. Less than a quarter of a million pupils are educated in government institutions; over $2\frac{1}{2}$ millions in institutions managed by boards or municipalities; nearly $4\frac{1}{2}$ millions in privately managed institutions; and over 600,000 in private institutions which are outside the general system of public instruction. The great majority of privately managed institutions are in receipt of aid from government or from the local bodies.

Classification of institutions.

4. The broadest division of educational institutions is that which classes them as public or private. Public institutions are those in which the course of study followed is that which is prescribed or recognised by the department of public instruction or by the university and which satisfy one or both of these authorities that they attain to a reasonable standard of efficiency. They are open to inspection, and their pupils are ordinarily eligible for admission to public examinations and tests held by the department or the university. All other schools are described as 'private institutions.' The majority of institutions are now public. Private institutions are for the most part purely indigenous schools in which are taught Sanskrit, Pali, Arabic, the Koran, etc.

Public institutions are again divided into publicly managed and privately managed. Publicly managed institutions are those under the direct management of government or of a local or municipal board. Privately managed institutions are those which are managed by societies or individuals. Privately managed institutions are ordinarily sub-divided as aided and as unaided. An aided institution is one which receives a subsidy from government or from a local or municipal board. Unaided institutions are financed solely from fees, endowments and subscriptions.

5. The division of educational institutions according to standards follows that which is ordinarily found in other countries. The primary school educates the child from the time he commences his studies (which may be at five years of age or upwards) in the 3 R's and a little geography, nature study, etc. The instruction is wholly in the vernacular save in some provinces where a little English is taught in some of the classes. The total length of the course is ordinarily five or six years and is sometimes divided into the lower primary of four years and the upper primary of one or two years. The bulk of the pupils, however, do not study beyond the lower primary standard or its equivalent and the actual length of school life is about four years. The middle school is of two kinds—the middle vernacular school, in which English is not taught and which in reality is rather a continuation school than the lower section of a secondary institution, since it leads on to no higher standard; and the middle English school, which contains the first two, three, or four stages of a secondary course of instruction. It is to be remembered that in India a stage or a class ordinarily indicates the work which will be completed or the standard in which a pupil will remain during a period of one year, although of course this is not an invariable rule. Above the middle school comes the high school, which again consists of two, three or four stages. The high school may, and in most provinces does, contain not merely the high but also the middle and even the primary classes. Similarly a middle school may contain primary classes. Secondary English schools, whether middle or high, continue the teaching of the vernacular and hence are called Anglo-vernacular schools.

Colleges are classified as second grade or first grade, according as they teach only up to the intermediate or up to the degree.

6. The double classification of public institutions is shown below. The first diagram indicates classification according to management.

Publicly managed	{ Government.				
	{ Local Board.				
Privately managed	{ Municipal.				
	{ Aided by Government or a local or municipal				
	{ Board.				
	{ Unaided.				

The next diagram shows classification according to standard, the periods indicated against each standard being averages only.

School.						
Primary	{ Lower	.	.	.	.	5 or 6 years.
	Upper	.	.	.	.
Middle (English or Vernacular)	.	.	.	.	.	3 years.
High	.	.	.	.	.	3 years.

College.						
Second grade (intermediate)	.	.	.	.	.	2 years.
First grade	{ B. A. or B. Sc.	.	.	.	.	2 years.
	{ M. A. or M. Sc.	.	.	.	.	1 or 2 years.

It thus appears that from start to finish the course for a student who pursues the arts or science curriculum occupies 16 to 18 years. If he commenced at five years of age, he would thus attain the B.A. at about 20 or 21. The periods of time shown against the school stages are only typical and do not apply to all provinces.

7. The scholarship system carries a pupil on from one grade of institution to another. It includes government, endowed and board scholarships. Endowments are ordinarily made for university study. Lower primary scholarships in Bengal and Bihar and Orissa are paid by boards. It is possible for a boy to proceed from the highest lower primary class, where he may earn a lower primary scholarship of R2 or R3, gaining in successive stages an upper primary, a middle scholarship (which carries him through the high classes), a junior and then a senior college scholarship, all of increasing value up to about R25 a month, till finally he may win a post-graduate scholarship of R100 or more. The award is sometimes made, especially in the lower grades of scholarships, on a consideration of poverty as well as of merit.

Separate scholarship systems exist in each province. The scholarships are ordinarily distributed territorially but with widening areas of competition in the higher grades. Thus a certain number of lower primary scholarships may be competed for in a sub-division, a certain number of senior college scholarships in a division or in the province as a whole. A large fraction of the amount spent on scholarships is awarded to students in medical, technical and other professional institutions. Special scholarships are often reserved for girls, Muhammadans and backward races.

Government also awards a certain number of scholarships for study abroad.

8. Education is financed partly from public and partly from private *Method of funds*. Public funds is a convenient expression for denoting those sums *financing education* which are the produce of imperial or local taxation—namely, provincial, local and municipal funds. Private funds include fees, endowments, subscriptions, etc.

The revenue in India is classified under imperial, provincial and divided heads. The Government of India appropriate the produce of certain taxes; that of others is retained by the provincial Governments; that of others again

is divided between the central and the provincial Governments. The revenues which are taken by the Government of India are utilised partly for imperial expenditure, such as defence, and partly for redistribution to provinces, where provincial revenues are unable efficiently to finance those administrative objects which are classed as provincial heads of expenditure. Among these is education. The tables in volume II show no imperial expenditure. The cost of government institutions, government officers and government grants is met from provincial revenues. This, however, does not mean that imperial revenues contribute nothing. Considerable assignments have of recent years been made from imperial to provincial revenues for the express purpose of enabling local Governments to expedite educational progress. But these assignments, once made, are classed as provincial revenue.*

Local and municipal funds are the produce of the cesses and various forms of impost which are levied by local bodies, together with government contributions and the income from other miscellaneous sources. These are used for the purposes of local self-government such as sanitation and education. Just as imperial funds are used to supplement provincial, so too provincial funds are allotted to local bodies, sometimes for unspecified objects and sometimes for a particular purpose, e.g., a scheme of town-planning, a waterworks or the improvement and extension of education. Money so allotted is shown in the tables as local or municipal funds.

The history of an allotment of money may be traced. The Government of India give to a local Government half a lakh of rupees recurring for primary education. The local Government adds in the same year one lakh recurring from its own resources to the sum it has previously spent on this object. The whole addition to the education budget, consisting of $1\frac{1}{2}$ lakh, is shown as provincial revenue. As primary education is the care of local bodies, the local Government decides to give the bulk of the money to local and municipal boards. It distributes to them in the course of the year $1\frac{1}{4}$ lakh, which is henceforth classed as local or municipal funds, and is disbursed by these bodies (perhaps with some further addition from local cesses) to their own staff of teachers, as aid to privately managed schools and perhaps partly in the erection of new school buildings. The local Government spends the remaining quarter of a lakh direct upon enhanced facilities for training or inspection, which are essentially charges on provincial funds and some increase of which is required by the additional number of schools to be opened by the local bodies.

Fees in government institutions are credited into the treasury. In board or municipal schools they are credited to the local fund or, in some cases, are left in the hands of school committees for expenditure on the spot. In privately managed institutions they are kept by the committee or proprietor of the institution, the maintenance of which is defrayed from them direct, together with such grant or subscriptions as the institution can command.

*Comparison of
the numbers
under primary
and secondary
education.*

9. The most striking feature of Indian education is its top-heaviness. From the point of view of mass education India is behind most countries that lay claim to civilisation, as is shown by the following examples† :—

	Percentage of the population enrolled in elementary schools.
United States	19.87
England and Wales	16.52
German Empire	16.30
France	13.90
Japan	13.07
Ceylon	8.94

* It may also be explained, as regards general table IV, that it is compiled from provincial reports and does not include the cost of the Education Department in the Government of India.

† An item in the total which requires some explanation is that of miscellaneous charges. It covers hotel charges, items incurred in connection with libraries and manuscripts, the cost of examinations, etc.

Report of the Commissioner of Education, Washington, for the year ended June 30th, 1916, page 1 and 663-672. The figures, save for India, are not fully up-to-date.

	Percentage of the population enrolled in elementary schools.
Rumania	8.21
Russia	3.77
Brazil	2.61
India	2.38*

At the census of 1911 only 5.9 per cent. of the population was found able to read and write.

10. The case is very different with higher education, especially that of a literary type. If India is far behind many civilised countries in elementary education, she can hold her own with them as regards numbers under higher education. The following figures of secondary education will suffice.†

	Percentage of the population enrolled in secondary schools.
United States of America	1.502
German Empire	0.988
England and Wales	0.62
India	0.486
Japan	0.354
France	0.32

The percentage for India is much raised if only the male population is considered. Of the female population, only 0.086 per cent. is enrolled in secondary schools; of the male, 0.869 per cent. On the other hand, nearly half of the pupils in secondary schools are reading in primary stages. But they are preparing for higher education and are often studying English as a second language. Such pupils are probably to some extent included in the figures of other countries. Some again are enrolled in middle vernacular schools, which can be termed secondary only in a qualified sense. But even when allowance is made for these facts the figures are sufficiently impressive.

11. The figures for university education too are significant. Paulsen has given the figure for the number of students attending universities in Germany and in countries of similar conditions as about 0.05 per cent. This has been held by some to be an under-statement, and the figure for that country appears to be 0.093 per cent., for England and Wales, in 1914-15, 0.054 per cent., for France 0.106, for Italy 0.063, for the Netherlands 0.066, for the United States 0.218 and for Japan 0.014. These figures must be received with caution; the total for England and Wales (26,800) probably includes many part-time students; that for Japan probably excludes students in private institutions. A more recent work on education gives the percentages as rather higher save in the case of the United States and France where they are given as lower.† The figure for India is 0.024. This suggests comparative backwardness. But, when it is considered that the female population may be practically disregarded in calculating the amount of university education in India, and that the percentage of the Indian population engaged in professions, commerce and other walks of life which require comparatively advanced education is less than a half of that in the United Kingdom, less than a fourth of that in France, and only just over a third of that in Germany, the percentage of

* This applies to primary schools, not to the primary stages of secondary schools, etc., which if reckoned in would bring the percentage to 2.63. If the percentage of males enrolled in primary schools to the male population were taken, it would be 3.83 and similarly with the addition of primary pupils not in primary schools it would be 4.25. These figures refer to public institutions, if pupils in elementary private institutions be added in, the percentages are higher (see paragraph 254).

† It is difficult to find accurate figures of secondary education. Those here given are collected from various statistical sources. See, for example, the Report of the Board of Education, Whitehall, for 1908-09. The latest report of the Commissioner of Education, Washington (1916), makes the figure for the German Empire in 1911 considerably lower (0.506 per cent.) and that for England and Wales considerably higher (about 0.9). The same publication gives 0.398 for Japan and 0.350 for France.

‡ The report of the Commissioner of Education, Washington, for the year ended June 30th, 1916 (which is still more recent than the work alluded to in the text), gives 0.0817 for the German Empire, 0.0796 for England and Wales, 0.104 for France, 0.063 for Italy, 0.088 for the Netherlands, 0.240 for the United States and 0.078 for Japan. These figures are for the year 1913-14, save in the case of the German Empire, where they are given for 1914-15.

those who are receiving university education is not to be despised. Still more is this the case where a single tract like Bengal is concerned. The percentage of those under university education to the population in that presidency is 0.05—equal to Paulsen's figure and almost equal to the figure for the United Kingdom in 1912; and, if the female population of Bengal be excluded, it is 0.097.

12. Thus, while the lower classes in India are largely illiterate, the middle class, which is the class that mainly patronises the higher institutions, is, at least numerically, educated to a pitch equal to that attained in countries whose social and economic condition is more highly developed. The earlier efforts of the East India Company were directed (as was not unnatural) to the encouragement of higher institutions established in towns. But the despatch of 1854 laid special stress on elementary education, and government has continued to press its claims. The weight of circumstances has told against the best intentions. The funds available are limited. The middle class find that higher education pays and loudly make known their wants. The lower classes though no longer hostile are lukewarm and seldom clamour for a type of instruction which brings no immediate and tangible reward.

Narrowness of higher education.

13. A second feature, which partly accounts for the first, is the narrowness of the course which ordinarily lies open to the Indian student.

With a view to showing this, a comparison was made in the last review with Japan. It is here reproduced with the latest available figures.

	Percentage of pupils in different kinds of institutions to the total number of pupils.	
	Japan. 1914-15.	India. 1916-17.
Universities	0.11	0.70
High schools	1.16	7.29
Middle schools	1.65	4.49
Primary schools	87.77	77.45
Institutions for training	0.37	0.24
Technical schools	6.52	0.27
Other schools	2.42	9.56
TOTAL	100.00	100.00*

These figures are the more striking in that the pupils in high schools in Japan are mainly girls, the number in boys' high schools being insignificant. Technical schools in Japan include the technical continuation schools. The large number of 'other schools' in India is accounted for by private institutions, etc.

This comparison, as was stated in the previous review, is not accurate and must be used with caution. But, however rough be the figures, it decisively proves that higher education in India runs in a literary groove and that the development of special vocational schools is far behindhand. The genius of the country is speculative rather than practical. The literary courses lead to government employ and are a necessary preliminary to the study and practice of the law. They adapt themselves to the traditional method of teaching and to the highly developed memorising faculty which characterises so many Indian students. Technical and industrial studies entail physical exertion (though this is by no means irksome to all) and offer a less easy or less lucrative career. But the greatest deterrent is the slow growth of industries and the shyness of capital in supporting them. Were industrial employment assured, students would readily come forward and technological institutions would fill and multiply.

* The figures for India include, under universities, students in law and medical colleges, but not those in other professional colleges, who are classed partly under institutions for training and partly under technical schools. Middle schools do not include middle vernacular schools whose pupils are classed under primary schools.

14. A third feature is the unequal development of education among the *Lack of education among sexes*. Of the male population, 5.31 per cent. is under instruction of some sort and 10.6 per cent. is literate. Of the female population 1.03 per cent. is under instruction and 1.0 per cent. is literate. Female illiteracy retards educational progress. When half the population grows up practically illiterate, the incentive to education in the other half must be sensibly lowered; and, when home education is almost unknown, education in general figures as something extraneous and not as a customary adjunct of life. Moreover the education which is imparted to the male portion of the population cannot have its full effect. An artificial state of affairs is created. The youth does not find in his home the environment and thoughts that surround him in the class room.

15. These inequalities in education may be illustrated by the following figures which show the amounts expended upon the maintenance of different kinds of institutions.

Direct expenditure in 1916-17 given in lakhs of rupees.

	Provincial Revenues.	Local and Municipal funds.	Fees and other private sources.	Total	Percentage on total.
	Lakhs	Lakhs	Lakhs	Lakhs	
Higher institutions for boys	82	28	239	349	44.0
Primary schools for boys	56	123	72	251	31.7
Vocational institutions for boys	60	5	19	84	10.6
Institutions of all sorts for girls	36	20	37	93	11.7
Other institutions (not included above)	7	1	8	16	2.0
TOTAL	241	177	375	793	100.0

The expenditure on institutions for girls does not represent the full expenditure on girls' education; for a considerable number of girls are educated in boys' schools.

16. The main criticism made upon courses of instruction in India is that *Characteristics they are over-literary*. This is true in the sense that in the lower standards of instruction, not much attention is paid to manual training and that in the higher the distinction has not been sufficiently firmly drawn between English as a language and English literature. On the whole, however, the criticism applies less to the actual courses prescribed than to the proportion in which different kinds of education are demanded and the methods which are employed in imparting instruction. It has already been shown that a literary form of education is that which is sought, as leading to government employ and the learned professions.

The elementary pupil in every country must devote his time during the earlier stages to acquiring the vehicles through which instruction is imparted. Owing to the early stage at which children in India leave school, little else than this is possible with the majority. The course for those who proceed further presents much the same characteristics as are found elsewhere. It is often urged that agriculture should be taught. The subject is not suitable for children in the elementary stage though an agricultural tinge may be, and often is, given to the instruction in rural schools.

The instruction given in the higher stages is certainly of a literary character. This, however, is due less to the course itself than to the preference shown for courses of this kind. Nor is it to be forgotten that science is now taught in most of the colleges and some of the schools with full equipment for experimental work. Nevertheless there is no doubt that, even with the restricted avenues of employment now open to students, greater variety of courses could be introduced with benefit. The B.A. course is not the most

suitable training for an office clerk, although the glamour of the degree makes the tradition difficult to break.

17. The method of teaching is regulated by the fact that the majority of teachers are not trained and that their qualifications are often poor. In primary schools only 65,818 teachers are trained out of a total of 219,667. In secondary schools, out of a total of 58,905 teachers, only 22,036 have received training and only 7,627 possess degrees. The result is that old traditions prevail, that learning by rote persists far into the higher stages and that the teacher adheres too closely to the book.

A second cause which militates against good teaching is the low pay ordinarily enjoyed by the staff. This is particularly apparent in unaided and in the poorer sort of aided schools, where the teacher is often only waiting for something better to turn up. Should he qualify as a pleader or should any other form of employment offer, he too often forsakes a profession to which he never meant to stick, with the result that pupils are instructed by a changing series of teachers who have not time to learn their trade and put little heart into their work. Pensionary and provident fund schemes will to some extent afford a remedy.

A third determining factor, which serves to accentuate these difficulties, is the dominance of the examination. The passing of the examination is essential for employment; and, where external examinations on an extensive scale are the rule, considerable truth is lent to the idea that the modicum of knowledge which can be acquired by a close study and memorising of the text pays better than general mental development. Here again in primary schools, where the examination is of less moment and where the children are of an age when memory plays an important and useful part in learning, this characteristic is less apparent than in institutions of higher standard.

The reports condemn this harmful influence of the examination over schools and courses. It is not that there are too many examinations, but they are conducted on a large scale, are almost wholly external, and too often form the only goal observed in school instruction. It is difficult to pluck more than a certain percentage of candidates, even if the results would justify a larger proportion of failure. Hence, says Mr. Hornell, the standard drops and more inefficient schools spring into being. This process is repeated till a multitude of inferior colleges and schools grow up, while good institutions languish, since any excellence which goes beyond the standard of the examinations or aims at producing other characteristics than a capacity for passing them, is deemed superfluous, if not positively harmful to a boy's career.

The use of keys. 18. As an illustration of the methods of learning in vogue mention may be made, at the risk of some digression, of the extent to which the production and use of keys are carried.

The use of keys is strictly forbidden in Bombay and boys and teachers found using them are severely dealt with. Nor has it reached so great dimensions in Burma as in some other provinces. In Bihar and Orissa it is surreptitious, though it appears to exist. Generally speaking, however, though condemned by the departments of public instruction, keys are produced in large quantities and often openly used in class—a practice connived at or even encouraged by the teachers. The evil seems to have reached its height in Bengal, where 1,058 keys are known to have been published during the quinquennium. Mr. Hornell states that their sale is marked by extortionate demand; for not only is the key ridiculously high priced, but, unless it is purchased, booksellers have been known to refuse to sell the original text. The key, though it may be quite worthless, is often priced more highly than the book which it is intended to annotate. The Burma report mentions the case of a simple English reader costing ten annas, the key to which is sold in two parts at one and a quarter rupee each.

The majority of these productions are not specimens of legitimate annotation but translations, paraphrases or lists of synonyms which are calculated to destroy all mental effort in the pupil save that of memory. Even the vernacular primer often has its key—an explanation of every word, no matter how easy it be or how often it recur, by one or more synonyms, some-

times more difficult than the word itself. Further, Mr. Hornell states that keys lead the student definitely astray. Indeed, errors in printing, spelling, grammar and explanation are not uncommon.

No satisfactory remedy has been suggested. The proper remedy lies with the teacher. Inefficient teaching compels the boy to resort to 'cribs.' The efficient teacher would not merely render such aids superfluous but would sternly suppress them as inimical to mental training. As it is, says Mr. Südmersen, there is a good deal of truth in the remark that even if one could succeed in preventing the use of keys by boys at school and at home, we should still have to face the fact that the teachers will continue to use them and merely dictate from them. Until the teacher improves and receives the support of public opinion, the intellectual force of millions of pupils will continue to be sacrificed to the interests of the compiler and publisher of keys.

19. Such are a few of the main features of education in India. Others *Summary.* will emerge in the course of this review. Those here described are of a general nature and permeate the whole system. India is often described as a land of extremes. The truth of the description is borne out by the conditions of education—a middle class widely instructed in those arts which qualify for the learned professions; a proletariat of which only a fraction is literate; a whole sex, almost totally devoid of any education whatever. Elementary education is based, so far as possible, on an adaptation of indigenous institutions and traditions. Higher education is an imported product. It is popular and has undoubtedly been attended with beneficial results. As is natural with an imported product, its development is marked by some crudities and its influence has to some extent been unsettling. It has appealed to the natural intellectuality of the people and has succeeded only partially in stimulating practical application.

CHAPTER II

EFFECTS OF THE WAR.

20. Far removed and sheltered as India has been from the war, the *General effects.* educational system has felt its effects. First and foremost, the financial stringency has postponed schemes of importance, and abundant evidence of this will be found in the following pages. Local Governments were precluded from drawing freely upon the unspent balances which had accumulated with them from the imperial grants made for education during the preceding years. For two years no new imperial grants were allotted, though fresh distributions of considerable sums are being made for 1917-18 and 1918-19. Many officers of the departments of public instruction and others employed in privately managed institutions have gone to military service or are employed on duties connected with the war. Recruitment of the Indian Educational Service from England has stopped. Missions have suffered in funds and workers belonging to enemy nationalities have been repatriated. Stores and apparatus have been delayed or lost through enemy action; prices have risen and some articles are not procurable.

21. A list of officers and private teachers who have proceeded on military *Educationists* service is given in appendix I. It shows fifty-one officers of the Indian *and ex-stu-* Educational Service, of whom Mr. C. Russell, principal of the Patna College, *dents on* and Mr. J. E. Gately, professor in the Government College, Lahore, *have been military ser-* killed; four officers of the provincial and twelve of the subordinate educational *vice.* services; twenty-one unclassified, of whom Mr. C. H. Line, of the Lawrence Military School, have been killed; and 179 teachers in private employment, of whom thirteen have been killed, namely, Mr. A. G. Simmons, teacher in the Abu High School, Mr. R. Crisp, Panchgani High School, Mr. T. P. Wood, principal, La Martinière College, Lucknow, Mr. S. G. Mellis Smith, professor, Canning College, Lucknow, Mr. B. H. Goldie, professor, M.A.O. College,

Aligarh, Mr. J. R. Pound, professor, Christ Church College, Cawnpore, Messrs. W. G. C. Smith and J. B. Whitfield, professors, St. John's College, Agra, Mr. F. A. James, vice-principal, Colvin School, Lucknow, Mr. Blakeson, Diocesan Boys' School, Rangoon, Mr. P. Freeland, Rifah-i-Am School, Rangoon, Brother Roustan, St. Francis de Sales School, Nagpur, and Mr. W. G. Lawrence, St. Stephen's College, Delhi. No complete list of ex-students is procurable. Many such have gone on active service. The Chiefs' Colleges have contributed 42, including ruling Chiefs. Two of these ex-students, the Thakur of Panchur and Subedar Pritham Singh, have been killed. Considerable numbers of old boys of European and Indian schools have also gone to the front.

Enemy missions' schools.

22. The part played in India by enemy missions was considerable at the outbreak of the war. In the Madras presidency alone one college and 477 schools with 31,000 pupils were wholly or partly under German management. When it became necessary to intern or repatriate the teachers, the problem arose of maintaining the institutions. The institutions affected fell into two classes—those under enemy management and those under certain of the Roman Catholic Orders which are of a cosmopolitan character and employed Germans and Austrians along with priests of allied or neutral nations. In the case of the latter, it has sometimes been possible for the missions to substitute subjects of allied or neutral nations in the place of enemy aliens. In the case of the former the schools have, so far as possible, been continued under the management of other missions.

The discovery of agencies to manage and teachers to instruct in place of those repatriated has been a matter of some difficulty. The three provinces mainly affected were Madras, Bombay and Bihar and Orissa. In Madras the Missionary Educational Council of Southern India have continued the schools under approved committees and correspondents, on condition of receiving the usual recurring grants from government. In Bombay a distinction was drawn between those institutions which it was desirable to maintain, and those whose disappearance would cause no serious dislocation. Grants were continued to the former on the withdrawal of hostile subjects from their staffs and in some cases the grants were temporarily increased so as to permit of the appointment of substitutes. The latter, comprising smaller institutions, were deprived of grant and either ceased without perceptible ill results or are being carried on unaided. In Bihar and Orissa, where some slight trouble was experienced among the congregations of enemy missions, the work of the German-Swiss Capuchins has been taken over by Belgian Capuchins and most of that of the German Evangelical Lutheran Mission by the Society for the Propagation of the Gospel.

Thus care has been taken to continue the educational activities formerly carried on by enemy agency, through the provision of new agency, and, where necessary, extra funds. Naturally the subventions received from Europe for the support of both allied and enemy missions have been seriously affected. As a case in point may be mentioned the Roman Catholic mission in Bihar and Orissa, which was largely dependent on funds from Belgium; these having ceased, government made a special grant of over R25,000.

Assistance rendered by educational institutions.

23. The influence of the war has not been wholly adverse, "It has excited interest," says the Bombay report, "among people of all ranks and of all ages in great world issues, enhanced their historical and geographical knowledge, broadened their outlook, awakened their sympathy for those adversely affected by it and united them in the common endeavour of all parts of the empire to contribute toward its successful prosecution."

Educational institutions have rendered assistance in various ways. The following is taken from the report of Mr. Waddington, principal of the Mayo College for Rajputana chiefs:—

"Four members of the English staff, Messrs. Twiss, Ashcroft, Braithwaite and Millar joined the army, and six of the college guardians returned to military duty. Eleven old boys have served with the forces on different fronts and several of them have been mentioned in despatches. On the outbreak of war in 1914, a sum of R3,482 was contributed by the boys and staff to the Imperial Indian Relief Fund, and a college war fund was subsequently opened, from which a monthly subscription of about R600 has

been sent to one or other of the relief funds. On the two anniversaries of the declaration of war in 1915 and 1916, gatherings were held in the college hall and sums of Rs 1,500 and 2,000 from the war fund were placed at the disposal of His Excellency the Viceroy as tokens of the devotion of the college to the just cause in which India is helping the Empire. Another donation of Rs 1,000 was presented on the occasion of His Excellency's visit to the college in November 1916. Other gifts, including four aeroplanes, and liberal donations to relief funds, were made from time to time by individual students. Bonds and certificates in the Indian war loan were purchased by the college staff, boys and servants to the value of Rs 53,200, and by the college fund to the value of Rs 1,41,000. Thus the total contributions to the war loan from the college up to 31st April 1916 amounted to Rs 1,94,200."

Mr. Waddington is himself now on military duty with the rank of Lieutenant-Colonel. From other Chiefs' Colleges, too, a number of ex-students have proceeded to the front.

24. Schools in general have taken a share in providing money and men. The universities have organised corps of the Indian Defence Force. In the Punjab an attempt was made to raise a company of graduates and undergraduates for active service. Only 56 fit recruits were forthcoming and the Lieutenant-Governor expresses disappointment at the result. These recruits have been formed into a Brigade Signal section and are shortly going on active service. As regards secondary schools in that province, however, the resolution on the Director's report says that their record is one of which they will be proud and proves that the younger generation has inherited to the full the loyal and martial traditions of their forefathers.

Red Cross work is reported in various institutions. The Belgian Children's Day was celebrated in Bombay schools in July 1916 and produced Rs 1,30,600. A War Loan Day was instituted in the same presidency in June 1917 and large subscriptions were secured. Though the Director in the Central Provinces complains of ignorance and apathy on the part of pupils and though he purposely refrained from calling for returns, he considers that the amount collected must have been considerable and specially mentions the contributions of the Amraoti schools to the Overseas Tobacco Fund for the army, the investment of nearly a lakh in the war loan by Berar schools (some of the aided institutions putting in their funds) and the keenness displayed at some girls' institutions in knitting and sewing. The most noteworthy report comes from the Punjab. Mr. Richey writes of the "splendid response made by the teachers and pupils of the Punjab secondary schools to appeals made to them on behalf of the war. To the Imperial Relief Fund and the Punjab Aeroplane Fund contributions poured in from teachers, from schools and even from separate classes. Teachers have invested largely in the war loan, and though this was obviously impossible for school boys, a suggestion by Mr. Tydeman of the Central Model School that parents might by monthly payments buy postal certificates for their sons resulted in an immediate and unexpected response. The whole of the staff at once announced their intention of co-operating and over 500 students applied for one or more cash certificates. Monthly instalments are still being received from 373 boys and the total result of the subscription from the school so far is Rs 6,820; and it is expected that the final amount will not be less than Rs 10,000. Apart from pecuniary contributions, the secondary schools have furnished their quota to the fighting forces of the Crown. In the Rawalpindi Division alone the number of teachers and pupils of secondary schools who have enlisted is nearly one thousand."

The Government of India issued a circular with proposals intended to encourage and facilitate the investment by pupils of savings in the Post Office cash certificates.

25. The dissemination of war news in the schools is important both for *Dissemination of war news.* general reasons and as an educative factor. The Bombay report says that in the early stages the popular mind was greatly affected by disquieting rumours which were encouraged by the adventures of the *Emden*. A campaign of war lectures was started in secondary schools and inspecting officers explained the situation in village schools. The resolution on the Director's report acknowledges the invaluable services rendered by officers of the department in dispelling wrong conceptions of the issues of the war and in teaching adults as well as children to comprehend the principles for which the Allies are

fighting. Lord Willingdon offered prizes aggregating Rs 500 for the best essays on the war written by undergraduates. Lectures illustrated with war slides are given in schools in Bihar and Orissa. In the Central Provinces steps were taken for the circulation of correct war news in all schools and the delivery of addresses on deeds of heroism, particularly by Indian troops, the origin of the war, the aims of the Allies, Ambulance and Red Cross work, etc.

The distribution of pamphlets and newspapers has played a considerable part. Quite a number of works on the war have been translated and issued to schools and the Maharani Nandkumvarba of Bhavnagar has distributed Gujarati leaflets free to schools. The *Al Hakikat* is found in most of the larger schools. Sometimes vernacular newspapers have been issued gratis. A notable development has been the creation of a war news association in the Government College, Lahore. The work of translation and dissemination is done by the students, who also tour at their own expense during the vacation and have assisted in enlisting a considerable number of recruits.

Educative effect of the War.

26. Mr. Coverton says that one cannot fail to notice the influence of war on the activities of schools and the minds of masters and students. "War lectures, exhibitions of war pictures, the spread of war news and war literature, have enlarged their hitherto too limited and cramped mental horizon; the celebration of the Belgian Children's Day, war relief and war loan meetings, and the observance of Durbar Day, Trafalgar Day (as at Belgaum), and the war anniversary have broadened and given a practical direction to their sympathies; thus, consciously or unconsciously, they are being led to a realisation of the unity of the British Empire and of the greatness of our imperial ideals which would have been quite impossible and even inconceivable in times before the war."

Education in Mesopotamia.

27. A small but interesting side effect of the war has been the opening of educational activities on a modest scale in Mesopotamia. The only regular schools maintained by the Turkish education department were a normal school for teachers and a secondary school at Basrah, and three primary schools. The *maktab*s were a negligible quantity so far as education was concerned. A new normal school has now been opened and 29 teachers have already passed the examination and gained appointments in six newly established government schools. The average attendance in these schools totals 400 and is growing rapidly. There are also six schools in receipt of State aid. The difficulty is the lack of qualified teachers; those who have been trained are required in the government schools and for the rest the best material available must be employed. A survey school has been opened, from which 36 boys have passed and been appointed assistant surveyors on probation. Young Arabs are also received in the engineering workshops to learn practical engineering.

CHAPTER III.

GENERAL PROGRESS.

I.—The Resolution of 1913.

28. The Government of India's resolution of April 21st, 1913, touched on *Policy of 1913*. every branch of education. Smaller universities and universities of the teaching type were contemplated, as well as development of higher studies and research. The policy of reliance on private effort in secondary education was re-affirmed, a system of school leaving certificates was commended, salaries for teachers were suggested on a reasonable scale and the importance of increasing grants-in-aid was emphasised. The resolution laid down Rs12 as the minimum pay for a trained primary teacher and contemplated a large expansion of elementary schools. It dealt with the training of teachers, technical education, the education of girls, Europeans and Muhammadans. But the main feature of the resolution was its insistence on the importance of those elements of education to which due weight is not always attached—the formation of character, moral and religious instruction, the provision of well supervised hostels, school hygiene and the broadening of the basis by manual training and other forms of practical education.

The resolution laid down no financial policy but indicated as an aim the doubling of the number of primary schools and pupils in the not distant future. The war has interfered with the programme both in this and in other respects. Nevertheless progress has been substantial during a period half of which was marked by financial stringency. Its main characteristics have been the allotment of imperial grants which, with the assistance of provincial revenues, has raised the public expenditure on education by over 50 per cent.; an increase of pupils by nearly 16 per cent.; much needed amelioration of the position of teachers; the creation or consideration of new universities; a quickening of the interest shown in educational problems and especially in girls' education; and some advance in those aspects of education which appeal to faculties other than those of the mind and the memory.

The present chapter aims at

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together with a further grant of 10 lakhs a year for university and secondary education was made available from 1912-13. In the same year a non-recurring grant of 387.18 lakhs was made. In 1913-14 a further recurring grant of 55 lakhs was distributed in specified amounts for different forms of education together with a small non-recurring grant of 0.95 lakhs. In 1914-15 a recurring grant of 9 lakhs was made for any educational purposes selected by the various local Governments and a non-recurring grant of 12.25 lakhs, which included 10 lakhs for the erection of hostels by the University of Calcutta.

This liberal policy, which was made possible by favourable financial conditions, was checked by the war. The recurring grants were of course continued but local Governments were precluded from drawing freely upon the unspent balances of these imperial grants (which in the case of non-recurring grants were large) and no new grants were made available during the years 1915-16 and 1916-17.

The new conditions produced by the prolongation of the war and the general desire manifested in India in common with other countries for the continuance of educational expansion notwithstanding financial difficulties have led at the close of the quinquennium to a resumption of the policy of imperial grants. At the end of 1916-17 a recurring grant of 30 lakhs was announced for the training of teachers and the improvement of their pay. This was made available in 1917-18 and a further grant has been announced for 1918-19 of 30 lakhs recurring for primary education and 30 lakhs recurring for agricultural, technical and commercial education.

The imperial grants given during the quinquennium (including that announced at the close of 1910-11) are as follows :—

Grants of	LAKHS OF RUPEES.	
	Recurring	Non-recurring
1910-11	..	93.00
1912-13	60.00	387.18
1913-14	60.00 55.00	.. 0.95
1914-15	115.00 9.00	.. 12.25
1915-16	124.00..	....
1916-17	124.00..	....
TOTAL	547.00	493.38

Thus the total allotment during the quinquennium has been 1,040.38 lakhs (= £6,935,866) and the annual recurring allotments amounted at the end of 1916-17 to 124 lakhs.

Of the total of 1,040.38 lakhs allotted during the quinquennium 1,039.12 lakhs have been placed in provincial balances or otherwise made available for expenditure. The expenditure out of these grants has amounted to 806.19 lakhs, and a sum of 232.93 lakhs remains unspent. There is a small sum of 1.26 lakhs which is held in reserve by the Department of Education.

30. The position is shown in the statement below.

Statement of Imperial Grants.

[In lakhs of Rupees.]

Province.	GRANTS TO END OF 1916-17.		EXPENDITURE								UNSPENT BALANCE	
			TO END OF 1915-16.		IN 1916-17 RECORDED UNDER				TOTAL TO END OF 1916-17.		ON THE 31ST MARCH 1917.	
	Recur- ring.	Non- Recur- ring.	Recur- ring.	Non- Recur- ring.	Education.		Other heads.†		Recur- ring.	Non- Recur- ring.	Recur- ring.	Non- Recur- ring.
					Recur- ring.	Non- Recur- ring.	Recur- ring.	Non- Recur- ring.				
Madras . . .	82.34	64.65	63.63	47.81	17.98	1.50	.36	1.92	81.97	51.23	.37	18.42
Bombay . . .	65.71	57.70	32.92	35.26	11.62	3.08	.02	.40	44.56	38.74	21.15	19.05
Bengal . . .	110.90	146.24	67.11	70.69	10.20	.43	.56	.91	86.87	81.03	33.12	65.21
United Provinces	70.86	66.57	34.89	42.14	12.63	2.10	3.34	..	70.86	44.24	..	22.33
Punjab . . .	41.06	39.39	31.51	30.30	9.55	..	..	..	41.06	30.30	..	..
Burma . . .	20.87	33.75	18.05	17.35	5.89	..	.18	..	25.02	17.35	4.85	16.40
Bihar and Orissa	50.66	41.37	32.00	21.03	8.32	.08	.17	2.34	41.39	23.15	9.27	17.02
Central Provinces	27.01	23.40	10.86	17.70	7.15	1.47	..	.38	27.01	10.55	..	3.85
Assam . . .	17.43	15.70	9.70	15.06	3.65	.14	.23	.30	13.58	15.70	3.85	..
N.-W. F. Province.	0.54	6.07	7.07	6.07	2.17	..	..	..	9.24	6.07	.30	..
Coorg . . .	.62	1.13	.44	1.08	.16	..	..	..	.60	1.08	.02	.05
Delhi . . .	5.00	2.70	3.81	2.78	.28	.01	1.00	..	5.00	2.70	..	..
Other provinces, etc.	6.62	13.47	3.68	12.33*	1.40	.30	.17	.26	5.34	12.98	1.28	.49
TOTAL . . .	526.80	512.32	346.47	337.60	100.00	0.20	6.03	6.71	452.50	353.60	74.21	158.72

Of the unspent balances 74.21 lakhs are debitable to the recurring assignments but are available only for capital expenditure; the remainder of the balances, amounting to 158.72 lakhs, is debitable to the non-recurring grants. Again, 230.79 lakhs are included in the balances of the major provinces and 2.14 lakhs were not spent by minor administrations, etc. The largest unspent amounts are in the balances of Bengal.

31. It is sometimes asserted that the imperial assignments for education have largely been wasted. The system under which large sums of money are made available at irregular intervals and not as part of an orderly financial programme may conduce on the one hand to discontinuity of policy or on the other to spasmodic and hence reckless expenditure. Schemes which accommodate themselves to the amount of the allocations may not be ready. The ultimate cost of a project may far exceed the sum available and uncertainty regarding the future may deter a local Government from embarking upon a scheme the first instalments of which will involve subsequent enhanced expenditure which they have no certainty of being in a position to meet. When a department or a local Government is suddenly provided with unanticipated funds, there is likely to be haste in expenditure. For the funds at disposal of the department lapse at the conclusion of the year and there may be difficulty in re-including them in the budget; while inflated balances in the hands of a

* Includes a refund of 10 lakhs.

† Educational expenditure through Public Works, Medical and other Departments.

local Government are a subject of public criticism. The danger of waste is particularly present in the case of non-recurring grants. But, despite the absence of any regular financial programme for educational expenditure, the reports bear ample testimony to the facts that the imperial grants have not been wasted, that they have been of inestimable service in remedying old and recognised defects and that the trouble has been, not any excess of funds, but their inadequacy to meet even the most obvious requirements of the situation. Apart from the many uses to which, as shown in this and the following chapters, local Governments have devoted these grants, large sums have been distributed to local bodies which have thus been enabled to raise the pay of their teachers, increase the number of schools and carry through other reforms.

Other critics state that the grants have been expended, not on increasing the number of schools, but in the quest of a fanciful and unnecessary standard of efficiency. The problem has, in a vast number of schools, hardly arrived at one of efficiency at all. It is still the removal of the grosser forms of inefficiency. But crying as are the claims of improvement and consolidation, the diagram No. 5 at the beginning of the review clearly shows the effect on numbers which the imperial grants have produced, as well as the fact that their effect is naturally continued into subsequent and leaner years. Roughly speaking, the expenditure (whether direct or indirect) of every additional pound sterling has been accompanied by the addition of one pupil to the enrolment. The grants have been used for expansion as well as for improvement; nor is it to be forgotten that improvement is a potent cause of expansion.

Generally it may be asserted that the imperial grants and the funds with which local Governments have supplemented them from provincial revenues have been of the greatest assistance. Their defect is that they are irregular. The realisation of a continuous programme of education requires a steady programme of finance. At present, says one of the reports, programmes of development have to wait upon expediencies.

32. But the imperial grants by no means account for the total increase in expenditure which has taken place during the quinquennium. The expenditure in 1911-12 was Rs 7,85,92,605 (£5,239,507), in 1916-17 Rs 11,28,83,068 (£7,525,538). There has thus been an increase of Rs 3,42,90,463 (£2,286,031).

The sources from which this expenditure is met and the increases which have taken place are as follows.*

		1911-12.	1916-17.	Increase	Percentage of increase.
		R	R	R	
Provincial revenues	.. . . . .	2,69,58,805	3,01,62,853	1,22,04,045	45.27
Local funds	.. . . . .	1,05,80,114	1,73,78,535	67,98,421	64.25
Municipal funds	.. . . . .	20,84,150	40,39,083	19,54,933	165.51
Total public funds	..	4,05,23,072	6,14,80,471	2,09,57,399	51.71
Fees	.. . . . .	2,19,09,646	3,18,71,138	99,62,492	45.47
Other private sources	.. . . . .	1,61,60,887	1,95,31,459	33,70,572	20.85
Total private funds	..	3,80,60,533	5,14,02,597	1,33,33,064	35.02
GRAND TOTAL	..	7,85,92,605	11,28,83,068	3,42,90,463	43.63

In 1914-15 a sum of about 30 Lakhs disappeared from the returns owing to the exclusion of certain Native States, figures for which had previously been shown along with those for British India. But for this, the increase of 43.63 per cent. would have been greater.

* The amounts of expenditure given here and in the following paragraphs are not comparable with those given in the financial statements of the Government of India and of Provincial Governments in the published accounts of the respective Government, as they have been compiled on different lines.

33. The following table compares the expenditure from different sources and the rates of increase of the total expenditure in the several provinces.

	PUBLIC EXPENDITURE.		PRIVATE EXPENDITURE.		TOTAL EXPENDITURE.	
	Amount.	Percent- age to total ex- penditure.	Amount.	Percent- age to total ex- penditure	Amount.	Percent- age of increase in quin- quennium.
	Rs.		Rs.		Rs.	
Madras	1,12,75,472	51.0	1,04,12,424	48.0	2,16,87,896	59.9
Bombay	97,87,187	62.8	58,01,572	37.2	1,55,88,759	14.5
Bengal	90,98,934	37.4	1,52,12,852	62.6	2,43,11,786	34.7
United Provinces	92,03,450	62.4	55,42,472	37.0	1,47,45,922	36.6
Punjab	62,92,360	57.9	45,70,960	42.1	1,08,63,320	58.2
Burma	38,35,117	57.4	28,44,028	42.6	66,79,145	41.0
Bihar and Orissa	47,04,104	57.7	34,47,976	42.3	81,52,080	45.7
Central Provinces and Berar	38,08,280	77.8	10,88,030	22.2	48,96,316	49.9
Assam	17,63,738	68.9	7,95,552	31.1	25,59,290	59.0
North-West Frontier Province	7,69,925	74.7	2,60,703	25.3	10,30,628	140.9
Other Administrations	9,41,904	39.8	14,26,022	60.2	23,67,926	..
India	6,14,80,471	54.5	5,14,02,597	45.5	11,28,83,068	43.3

The excess of expenditure from public over that from private funds has risen from 25 lakhs in 1911-12 to a crore in 1916-17. The increase would have been larger but for the exclusion of Native States in 1914-15; e.g., apart from Native States, the percentage of increase in Bombay would have been 32.5.

34. The following table compares the amounts of expenditure on education from provincial revenues, the proportions they bear to total expenditure and the percentage of increase during the quinquennium.

Province	Expenditure on education from provincial revenues in 1916-17.			Percentage of increase in expenditure from provincial revenues since 1911-12
		Expenditure on education from provincial revenues in 1916-17.	Percentage of expenditure from provincial revenues to total expenditure.	
	Rs.			
Madras	76,93,073	35.5	73.9	
Bombay	75,50,817	48.4	33.9	
Bengal	66,65,647	27.4	21.9	
United Provinces	47,98,188	32.5	27.9	
Punjab	31,09,136	28.0	36.4	
Burma	27,68,394	41.4	45.8	
Bihar and Orissa	29,57,757	36.2	51.3	
Central Provinces and Berar	15,96,198	32.6	50.0	
Assam	9,97,022	38.9	69.8	
North-West Frontier Province	2,88,878	28.0	191.9	
Other provinces	7,39,743	31.2	..	
	TOTAL	3,91,62,853	34.6	45.3

At first sight it may appear that the increase in the annual provincial expenditure is less by about two lakhs than the recurring imperial grant allotted during the period and included in provincial revenues. But, in the first place, only 106.12 of the imperial recurring grant of 124 lakhs was spent in 1916-17, and, in the second, the sum of 391½ lakhs shown in these tables does not indicate the full expenditure from provincial revenues, out of which in that year about 115 lakhs were handed over for expenditure by local bodies and figure as local or municipal funds. Hence, though not all provinces have fully spent their recurring assignments, provincial revenues have on the whole made a substantial contribution to the increase. Provincial expenditure (including expenditure from imperial grants and contributions to local bodies) is in reality about 507 lakhs.

Though the increase in expenditure during the past few years has, owing to the war, disappointed expectation, the financial statements show that certain reductions in 1915-16 and 1916-17 below the figure for 1914-15 have given place to an increase in the budget for 1917-18, and that the budget estimate of expenditure from the public revenues in 1918-19 is Rs. 31,65,000 (£4,221,000) against an expenditure of Rs. 30,17,835 (£2,021,189) in 1911-12.

Expenditure from local and municipal funds

35. The resources of local bodies are proverbially inexpensive. Their expenditure upon education has indeed risen from Rs. 1,35,64,264 in 1911-12 to Rs. 2,23,17,618 in 1916-17. But more than 115 lakhs out of the expenditure now shown as incurred by local bodies represents contributions from provincial revenues (including some portion of the imperial grants); and much of this sum has been handed over to local bodies during the quinquennium. Further details will be found in paragraphs 113 to 117.

A writer who has carefully studied the economic conditions of a Bengal district declares that the local taxation amounts in its yield to the local authorities to about $\frac{1}{2}$ per cent. on the total income of the population of that district. "The truth is," he writes, "that in Bengal not only is all taxation exceptionally light, but local taxation in particular is an insignificant burden upon the resources of the people, that the provision of local conveniences and material benefits is in consequence very inadequate, but that it cannot be improved unless larger sums are placed at the disposal of the local authorities."*

Fees.

36. The amount contributed by fees constitutes 28.2 per cent. of the total expenditure. The magnitude of this proportion arises rather from the paucity of funds derived from other sources than from the rates of fee charged. The annual fee payable by a student averages Rs. 69.4 a head in a college, Rs. 14.4 in a secondary school and 13.7 annas in a primary school. In English public schools the tuition fee has been stated to average a sum equivalent to Rs. 300, and in aided secondary schools about Rs. 118; in France the secondary school fee ranges from Rs. 213 to Rs. 433, in Germany from Rs. 82 to Rs. 112.†

Inadequacy of funds.

37. These, together with endowments and subscriptions, form the sources from which education is financed. India spends 4.3 per cent. of her public revenues upon education—a figure which compares not unfavourably with the percentage so spent in other countries.‡ But the total expenditure from all sources upon education represents only Re. 0.46 per head of the population, and expenditure from public sources Re. 0.25. The incidence of Parliamentary grants alone (to say nothing of local rates) varies from seven to ten shillings in different parts of the United Kingdom. Still greater is the contrast when the incidence of total expenditure on primary education is considered.§ Even when allowance is made for difference in the purchasing power of money, it is clear that the sums now at disposal are insufficient. The demand for

higher instruction is growing rapidly; but even the available facilities have to be provided at a rate which can only result in much inefficiency. There remain the still more gigantic problems of mass education, industrial training and the almost untrodden field of the education of girls. A question which faces the practical educationist is that of the source from which these pressing needs are to be met.

III.—Institutions and pupils.

38. Institutions (public and private) have increased during the quinquennium by 16,530 to a total of 192,755 and their pupils by 1,071,225 to 7,851,946. Public institutions have increased by 18,620 to 154,952 and their pupils by 1,078,583 to 7,207,308.

39. The figures for provinces, together with the percentages of those under instruction to the population, are as follows.

different provinces.

Province.	Institutions in 1916-17.	Percentage of increase or decrease.	Pupils in 1916-17.	Percentage of increase or decrease.	Percentage of those under instruction to total population.
Madras	36,045	+16.1	1,661,012	+29.7	4.01
Bombay	13,264	-19.4	780,504	-15.4	3.9
Bengal	48,373	+12.4	1,918,432	+13.0	4.2
United Provinces	17,728	+7.0	894,886	+25.7	1.9
Punjab	9,357	+26.3	476,738	+25.1	2.4
Burma	27,079	+16.7	592,523	+33.1	4.9
Bihar and Orissa	29,632	+0.57	845,025	+5.01	2.4
Central Provinces and Berar	4,561	+14.8	351,165	+12.1	2.5
Assam	4,890	+18.4	233,013	+28.4	3.5
North-West Frontier Province	994	+10.3	46,285	+32.6	2.1
Other Administrations	832		51,463		3.2
India	192,755	+9.4	7,851,946	+15.8	3.2

The figures are affected by the exclusion in 1914-15 and following years of the returns of certain Native States which had previously been included. The change removed an anomaly but vitiates comparisons. It reduced the figures in that year by approximately 5,000 institutions, a third of a million pupils and 30 lakhs of expenditure. On the other hand, the figures for Ajmer-Merwara, Baluchistan and Bangalore were included for the first time in 1916-17, increasing the totals by 497 institutions, nearly 30,000 pupils and just over 10 lakhs. The net result is that the increases have been lowered by some 4,500 institutions, 300,000 pupils and 20 lakhs. The effect of the former change is particularly noticeable in Bombay, where over 200,000 pupils were struck out of the returns in 1914-15. If the pupils of Native States are excluded from the figures of that presidency in 1911-12, the enrolment will be found to have risen from 713,145 to 780,504, and the apparent decrease by 15.4 per cent. is converted into an increase by 9.4 per cent. The Bihar and Orissa figures were similarly affected by the loss of over 54,000 pupils.* An adjustment made for all India on the basis of the net results noted above would give an increase of nearly 1,400,000 pupils and would substantially enhance the percentage of increase.

40. The figures given above deal with all institutions. The amount of increase is diminished by the fact that there has been a falling-off in the num-

*The figures given for 1911-12 in the body of the Bihar and Orissa report are for the area under review in 1916-17.

ber of private institutions and of their pupils. The figures for public institutions are as follows.

	Public institutions in 1916-17.	Percentage of increase or decrease.	Pupils in 1916-17.	Percentage of increase or decrease.	Percentage of those in public institutions to total population.
Madras	31,340	+21.1	1,537,039	+33.3	3.7
Bombay	11,388	-15.7	739,385	-11.2	3.8
Bengal	46,104	+13.5	1,855,512	+12.9	4.1
United Provinces.	12,912	+17.1	805,420	+20.6	1.7
Punjab	6,442	+48.8	421,043	+33.2	2.1
Burma	9,564	+43.3	393,399	+45.5	3.2
Bihar and Orissa	26,867	+ 3.5	797,471	+ 4.8	2.3
Central Provinces and Berar.	4,503	+13.5	349,061	+11.2	2.6
Assam	4,587	+15.0	224,819	+27.0	3.3
North-West Frontier Province	685	+113.4	41,233	+61.8	1.9
Other Provinces	560	..	42,926	..	2.6
TOTAL .	154,952	+13.7	7,207,308	+17.6	2.0

It is by the number of public institutions and their pupils that the progress of education must (at least in most of the provinces) be judged and the result of an enhanced expenditure must be measured.

Increase in different kinds of education.

41. As regards the growth of different kinds of institutions, it is significant that while the percentage of increase among pupils in primary schools is 16.5, that in secondary schools is 28 and that in arts colleges is 58.9. Pupils enrolled in high school classes have increased by 52.5 per cent.

Other signs of progress.

42. In addition to the figures of those under instruction the progress of intellectual activity can be roughly judged by the increase in the number of publications, etc. Since the latest figures are not available, these are given for the five years 1910-11 to 1915-16. The number of printing presses increased from 2,751 to 3,237, of newspapers from 658 to 857 and of periodicals from 1,902 to 2,927. There has been no great change in the number of books published. Books in English or other European languages stand at 1,541—a decrease of 37; books in Indian vernaculars or classical languages at 10,658—an increase of 595. The growing popularity of periodicals is noteworthy. Madras possesses 1,195 educational associations and 764 reading rooms and literary societies with a membership of over 133,000. Bombay has 227 public libraries. In the Central Provinces boards are encouraging village libraries.

Review of progress.

43. The graphs which figure at the beginning of this volume give an idea of the growth of education from about 1860 onwards. The following tables show the same by means of figures.

Institutions and pupils.

Year.	INSTITUTIONS.		PUPILS.	
	Number.	Increase or decrease over previous figure.	Number.	Increase or decrease over previous figure.
1855.	50,908	..	923,780	..
1870-71	83,052	+32,054	1,894,823	+ 971,043
1881-82	114,109	+31,057	2,451,089	+ 557,166
1886-87	127,116	+13,007	3,343,544	+ 891,555
1891-92	141,793	+14,677	3,856,821	+ 513,277
1896-97	152,025	+10,232	4,356,870	+ 500,049
1901-02	147,703	- 4,322	4,521,900	+ 165,030
1906-07	162,528	+14,825	5,388,632	+ 866,732
1911-12	176,225	+13,697	6,780,721	+1,392,089
1916-17	192,755	+16,530	7,851,946	+1,071,225

Expenditure.

(figures in lakhs of rupees.)

Year.	TOTAL EXPENDITURE.		PUBLIC EXPENDITURE.	
	Amount.	Increase over previous amount.	Amount.	Increase over previous amount.
1881-82	186.07		not known	
1886-87	252.42	+ 66.35	134.82	..
1891-92	305.20	+ 52.78	156.18	+ 21.36
1896-97	352.45	+ 47.25	167.06	+ 11.48
1901-02	401.21	+ 48.76	177.04	+ 9.38
1906-07	559.04	+157.83	206.35	+ 119.31
1911-12	785.93	+226.89	405.23	+108.88
1916-17	1128.83	+342.90	614.80	+209.57

Figures previous to 1885-86 are not reliable. In that year the first quinquennial review was written. The figures for 1855 and 1870-71 are taken from the report of the Education Commission of 1882. They omit Burma and the figures for the Punjab are admittedly imperfect. Territorial expansion, the registration of existing schools hitherto not brought into the returns and changes in classification, etc., largely account for the considerable increases during those early periods. In no fully recorded quinquennium has the number of schools increased so largely as in that now under review. In respect of increase in pupils the period is second only to the preceding quinquennium, and, if the changes just mentioned in the collection of figures be taken into account, it stands on a par with that period. In the matter of total and of public expenditure it constitutes an easy record. Other items in which it shows the highest increase yet attained are college students (where the increase more than doubles the highest previous quinquennial), secondary institutions and their pupils, primary schools (in which last the increase is far more than double).

In respect of primary pupils and the education of girls and Muhammadans the increase was greater than in any preceding quinquennium save the last.*

There are other matters (*e.g.*, progress in commercial education) in which this quinquennium has shown particular evidences of development.

44. These graphs and figures clearly show the financial effect of the imperial grants inaugurated by Lord Curzon and again during the past five years. In the fifteen years ending 1901-02, public expenditure on education had increased by only 42.22 lakhs. In the past fifteen years it increased by 437.76 lakhs. (The decline indicated in the graphs during 1915-17 is due to the prohibition on expenditure from balances and concerns only capital expenditure.) The period from 1897 to 1902 is the most stagnant in the annals of Indian education; the increase of pupils was small, the number of institutions declined. The time was one of calamity—two severe famines and a widespread epidemic of plague.† Half way through the quinquennium now under review, the returns were shorn of a fraction of their figures and the empire was plunged into a devastating war. Nevertheless the period marks a record in the growth of expenditure and of new institutions and in other important respects.

The numerical result.

45. But any sense of complacency resulting from these figures will be chastened by the fact that only 3.22‡ per cent. of the population is under instruction—though it is to be realised that the number of male pupils has risen from 4.47 per cent. of the male population to 5.31 per cent. These calculations are made on the census figures of 1911, and hence are probably a slight over-statement.

* As figures for these items may prove interesting, they are given below.

College students, secondary schools and pupils and primary schools.

Year.	COLLEGE STUDENTS.		SECONDARY SCHOOLS.		PUPILS IN SECONDARY SCHOOLS.		PRIMARY SCHOOLS.	
	Number.	Increase or decrease	Number.	Increase or decrease over previous figures.	Number.	Increase or decrease over previous figures.	Number	Increase or decrease over previous figures.
1851-52 . . . .	..	..	..	..	..	..	..	..
1856-57	11,501	..	4,517	..	429,003	..	89,167	..
1861-62	16,277	+ 4,776	4,872	+ 355	473,204	+ 44,201	97,109	+ 7,022
1866-67	18,783	+ 2,506	5,267	+ 395	535,153	+ 61,861	103,920	+ 6,811
1871-72	23,009	+ 4,226	5,403	+ 226	622,768	+ 87,613	97,854	- 6,006
1876-77	25,168	+ 2,159	5,895	+ 405	713,342	+ 90,574	112,030	+ 15,976
1881-82	36,284	+ 11,116	6,370	+ 472	824,370	+ 211,025	123,578	+ 10,648
1886-87	59,679	+ 22,355	7,603	+ 1,323	1,180,335	+ 261,065	142,203	+ 18,625

Girls, Europeans and Muhammadans.

	GIRLS UNDER INSTRUCTION.		EUROPEANS UNDER INSTRUCTION.		MUSLIMAHANS UNDER INSTRUCTION.	
	Number.	Increase or decrease over previous figures.	Number.	Increase or decrease over previous figures.	Number.	Increase or decrease over previous figures.
1851-52 . . . .	..	..	..	..	..	..
1856-57	227,736	..	23,503	..	734,036	..
1861-62	330,943	+111,307	25,705	+2,290	857,236	+133,200
1866-67	492,159	+ 63,115	29,176	+3,351	966,632	+ 70,396
1871-72	441,470	+ 42,312	31,122	+1,916	978,221	+ 11,589
1876-77	615,928	+200,558	31,120	+ 8	1,172,371	+184,150
1881-82	932,023	+307,895	34,372	+3,242	1,551,151	+378,780
1886-87	1,270,410	+277,494	42,545	+9,173	1,621,364	+273,213

* Mr. Nathan also attributed the arrest of progress in primary education to the fact that previously the department had been dealing with comparatively accessible and well-to-do classes, but had now to carry education of isolated tribes, to scattered hamlets, to poorer communities, to the low castes and to the wild jungle tribes. *Progress of Education in India, 1871-98-1901-02, Being the Fourth Quinquennial Review*, page 451.

† The following figures will serve for comparison, though they refer only to pupils undergoing elementary education:—U.S.A. 11.32 per cent. of the population, England and Wales 16.52, Germany 16.39, France 17.9, British Isles 17.31, Jamaica 11.42, Ceylon 8.21.

46. The increase of those under university instruction has been by 61·6 *University education.* per cent. The improvement of university and college buildings, especially for science, has proceeded apace. Matters for serious concern are the paucity of professors as compared with the rapid increase of students and the remarkable variation in the cost and general efficiency of institutions which in the eyes of the universities are of equal value.

The universities have received money from the Government of India and have been enabled to provide themselves with accommodation, where this was necessary, to create chairs for higher teaching and to promote research and instruction by university professors. The University of Calcutta in particular has received considerable State aid as well as private benefactions and carries on higher teaching on a large scale. Shortly after the conclusion of the period the new Patna University was incorporated, its object being to combine affiliating and examining functions with the maintenance of a strong central group of residential institutions. The Benares Hindu University was incorporated during the quinquennium as a local and residential university—the first of this kind in India. A university with two centres has been launched in the State of Mysore. Schemes have proceeded for universities at Dacca, Nagpur and Rangoon. The Government of India have had under consideration the constitution of the senates; and the appointment of a Commission to investigate the University of Calcutta evidences the interest taken in university reform.

47. The problem of university education is indissolubly bound up with the secondary institutions. Controversy arises from the interaction between two schools of thought. From the one point of view, a rapid expansion of schools, colleges and pupils is essential for the well-being of the country, the universities must be under popular control and the powers both of the professorial body and of government should be reduced to a minimum. This attitude received illustration in the difficulties which attended the passage of the Patna University Bill. From the other point of view, reasonable efficiency must precede recognition, the voice of the expert should predominate in the university and, so long as there is insistence upon control by bodies containing a considerable lay element, so long must government protect the interests of higher education by the retention of certain powers. Government is frequently accused of trying to check the expansion of higher education and, to that end, of making a fetish of efficiency. It has already been shown that government has liberally subsidised colleges and secondary schools during the quinquennium, that the increase of pupils in these institutions has proved a record and that, whatever her position in other branches of education, India is not numerically behindhand in these respects. The attainment of college students varies from province to province and is affected by the capability of those who are admitted to university courses. Mr. Hornell says that the normal student who has passed the Calcutta matriculation even in the first division is not capable of anything approaching real university study. The principal of a Bombay college remarks that owing to the unsatisfactory nature of teaching in many secondary schools, the junior college classes are rapidly becoming little better than indifferent school classes. Mr. Südmersen says that the equipment of first-year students as regards the broad facts of life, of history and of geography, is defective and that a world of ideas has to be created before any profitable advance in literature can be made. A suggested solution of the problem is the transfer of these classes to high schools. But the Bombay Director points out that such action would presuppose great improvement in the schools and is unlikely to commend itself to public opinion.

48. The great increase in secondary education, amounting to over 28 *Secondary Education.* per cent. of the pupils, and over 52 per cent. in the high school classes, has been accompanied by an increase of over 53 per cent. in the expenditure. Progress has been made with the schemes of improvement initiated subsequently to 1906, save in the eastern provinces, where administrative redistribution and the deterrent cost of dealing with a great number of institutions have delayed the realisation of the main proposals. Though pay has been substantially raised in most of the provinces, systems of grant-in-aid liberalised, buildings improved, and considerable reforms introduced in science teaching, the condition of secondary education as a whole still remains unsatisfactory.

Particularly depressing are the reports from Bengal, where only 1.3 per cent. of the English and classical teachers are certificated, the pay of all secondary teachers averages only Rs 29 a-month, and the cost of a pupil in an Anglo-vernacular school for Indians averages barely Rs 20.5 a-year.

There is a general impression that the growth of demand for this form of education, sometimes without adequate means of coping with it, has been accompanied by a lowering in the standard of some matriculations. The University of Calcutta constituted a committee in 1915 for investigation of the rapid increase of passes at this and other examinations. The result of its deliberations is not yet known. The number of pupils who present themselves for school leaving certificates continues to increase. Steps have been taken to remedy certain defects of the system in Madras, and schemes for such certificates were being considered in Bombay, the Punjab and Bihar and Orissa.

Primary Education.

49. There are now 142,203 primary schools in India with 5,818,730 pupils. These figures represent increases of 15 and 16.5 per cent. respectively. The expenditure has increased from a little over two crores to nearly three crores. The number of pupils undergoing elementary instruction can be more accurately calculated by considering not merely primary schools but the primary departments of secondary schools and such private institutions as impart secular education. On this computation the number of children undergoing elementary instruction is now 6,748,101, which is equivalent to 2.8 per cent. of the population, being 4.5 per cent. of the male and 0.95 per cent. of the female population. Discouraging as these figures are, they are still more so when it is remembered that 90 per cent. of the children are congregated in the lower primary classes. Two possible lines of advance have been indicated during the quinquennium and just after its close. The former is the acceleration of progress under a voluntary system by means of enhanced grants and careful surveys. Among survey projects may be mentioned the application to Bengal in general of the union school system already initiated in Eastern Bengal districts, the proposals made in the United Provinces for the organisation of circle schools with feeder institutions and the scheme formulated in Bihar and Orissa which proceeds on a mathematical increase of the pupils in various schools according to their existing enrolment. The latter is the introduction of some compulsory measure. Such a measure was introduced for municipalities in Bombay just after the close of the quinquennium and is contemplated in Bengal, the Punjab and Bihar and Orissa. The difficulty inherent in the former plan is the doubt whether parents who partially depend upon the labour of their children will choose to send them to school for any reasonable length of time. The success of the second plan depends upon the willingness of local bodies to avail themselves of the permission of adopting compulsory measures and to tax themselves with a view to realising them. It is encouraging that a measure has been passed to permit the enhancement of cesses for educational purposes in Berar. In the case of both schemes the provision of funds from provincial revenues will undoubtedly be necessary. The whole subject has received much attention during the quinquennium. In the United Provinces a representative committee under the presidency of Mr. Justice Piggott discussed the problem and evolved the scheme of circle schools, to which allusion has just been made, with a view to encouraging boys to continue their studies to a higher stage than is now the case. It is a matter for congratulation that the proportion of cost borne by fees has declined during the quinquennium and there is no reason why any boy should be deterred from obtaining elementary instruction on the score of poverty. But the question is not merely one of expansion of facilities or of revision of fees. The duration of school life, though it has increased during the quinquennium, is still too short to prevent a speedy relapse into illiteracy among a large fraction of the pupils educated. The problem is largely an economic one, although the provision of more capable teachers will probably prove effective in its partial solution.

Oriental studies.

50. It has not been found possible to carry out the proposal of the Conference of Orientalists for the foundation of an oriental research institute, but some interest is manifested in the development of the study of Sanskrit, Arabic, Pali, etc. The number of pupils shows no diminution. Expenditure

has increased and in the Bombay Presidency the foundation of a Bhandarkar Research Institute at Poona and the proposal for a Cama Oriental Institute show that the public are desirous that India should take a proper place in the prosecution of classical research. On the other hand the introduction of a modernised curriculum into the majority of the large *madrassas* of Bengal points to a feeling among the Muhammadans of that part of India that their future lies along the prosecution of utilitarian studies.

51. The feature of medical education has been the growing demand on *Professional education.* the part of the public for a larger supply of practitioners. It has been necessary on the one hand to meet it and on the other hand to guard against the abuses to which such a demand may give rise. Protection has been afforded by registration Acts and a medical degrees Act. Expansion has been provided by the creation of new medical authorities empowered to grant licenses and diplomas to those whose qualifications are not of university standard, and by the affiliation of a privately managed college in Calcutta. An important development was the opening of the Lady Hardinge Medical College for women at Delhi.

Considerable attention has been paid to the reorganisation of agricultural education, with a view to raising the standard of the colleges which train experimenters and instructors and to affording facilities to landowners and agriculturists. A description of the changes which have taken place in the colleges is given at length in chapter XI.

Institutions for imparting commercial education have shown remarkable development. The principal event was the opening of the Sydenham College of Commerce in Bombay. The study of economics and of commerce in its higher branches has been recognised in the universities by the creation of a chair at Allahabad and courses of commerce at Bombay and Allahabad. Business schools have multiplied—a fact which shows that the demand for skilled clerks is rising. The number of students has more than doubled and expenditure has nearly trebled.

52. The number of students undergoing technical and industrial education has not largely increased. The period has been one of revision and consolidation rather than of expansion. In the field of civil engineering the Public Works Department Reorganisation Committee has pronounced the colleges to be well staffed and equipped but has recommended some reorganisation and greater attention to practical training. The Morison Committee in England and the Atkinson-Dawson Committee in India investigated the question of technological scholarships tenable abroad and the possibility of establishing a closer contact between educational institutions in India and industrial firms. Here again, the recommendations have been for greater emphasis upon the practical side of instruction. New rules calculated to permit of this improvement have been framed for technological scholars in the United Kingdom. The system of apprenticeship receives enhanced prominence in the systems of training pursued in India. Individual schemes and institutions have made some progress despite the financial stringency and the difficulties which surround industrial education. The Indian Institute of Science at Bangalore is doing good work. There has been marked improvement in some of the more important technical institutions, and the schools of art, which are mainly industrial, are progressing upon sound lines. The schemes for the removal of the Civil Engineering College at Sibpur near Calcutta and for the establishment of a technological institute in that city are at present in abeyance. Effect has been given in large measure to the various proposals in the United Provinces for the establishment of a technological institute at Cawnpore and the removal of the industrial departments from the Thomason College at Roorkee (which will henceforth be an institute purely of civil engineering) to Lucknow, Bareilly, and Benares. The Cawnpore Institute has commenced work but is at present hampered by difficulties of staffing. The first decade of the century had seen the growth of many schemes the realisation of which was bound to occupy a considerable period and is still taking place along with their partial revision in the light of subsequent experience. During the quinquennium the Indian Industrial Commission was constituted and its deliberations may be expected to throw considerable light upon this thorny subject.

The training of teachers.

53. The training of teachers has received special attention. The number of training institutions has risen from 587 to 816, that of students from 13,425 to 19,396 and expenditure from $21\frac{1}{2}$ lakhs to nearly 34 lakhs. For higher training new colleges have been opened at Lucknow, at Jubbulpore (just before the commencement of the period) and at Peshawar. The college at Patna has been much improved and the establishment of further colleges is proposed at Rajahmundry in Madras and at Agra. In the matter of vernacular training the principal features have been the expansion of the system of small training classes attached to middle vernacular schools in the United Provinces and the framing of a scheme whereby the *guru*-training schools of western Bengal will be enlarged and improved on the analogy of the system previously sanctioned for eastern Bengal. The teaching staff has been made more efficient and pupil teachers of better qualifications are attracted to the institutions. Nevertheless the position as regards trained teachers cannot yet be looked upon as satisfactory. Out of a total of 280,738 teachers only 88,169 or 31.4 per cent. possess training qualifications. The Government of India considered the situation sufficiently serious to address a circular to local Governments indicating the desirability of offering facilities sufficient to repair the annual wastage among the trained staff and provide for further expansion. At the close of the period the Government of India manifested its realisation of the prime importance of training by announcing an imperial grant of 30 lakhs a year for this object and also for improvement of the pay of teachers—a necessary adjunct of any large expansion in training facilities, since candidates are not forthcoming for the career of teacher unless it offers reasonable prospects.

The Secretary of State in 1916 sanctioned a proposal of the Government of Madras for the deputation of officers of the provincial and subordinate services to England and elsewhere for periods not to exceed two years, and on annual stipends not to exceed £200, *plus* certain expenses to enable them to study foreign systems and fit themselves by training for inspecting and professorial posts.

Education of girls.

54. Great difficulties are still encountered in the matter of girls' education. Social reasons such as the institution of *purda* in some communities, early marriage, etc., form a stumbling-block. The advance in the number of girls under instruction has been 29.1 per cent. during the quinquennium. But attendance is only 47.7 per cent., 38 per cent. of the girls are crowded in the most rudimentary classes and only 1.03 per cent. of the total female population is reckoned as enrolled at school. Of educational difficulties the greatest is the provision of a sufficiently large and well-qualified staff of lady teachers and inspectresses. In this respect there has been distinct improvement, the number of women under training being now 2,813, which represents an increase of 74.4 per cent.; and some of the homes instituted for the training of widows promise good results. A marked feature of the quinquennium has been the opening of two excellent women's colleges in Madras. The expansion of facilities for training and for collegiate education coupled with improvement in the general conditions of service may, it is hoped, render the supply of teachers easier in the future as well as tend to form public opinion. The extent to which the formation of public opinion has already proceeded is difficult to ascertain in view of the varying circumstances of different areas. Considerable interest, however, has been aroused during the quinquennium by Mrs. Fawcett's deputation to the Secretary of State, the meeting of various committees in India and the controversy which has continued over the education best suited for Indian girls.

Education of Europeans.

55. An important conference on the education of Europeans and the domiciled community was held at Simla in July, 1912. Although it has not been found possible to accept all the proposals of this conference, the exchange of ideas and the allotment of liberal grants have resulted in a marked expansion in this type of education. The number of pupils has risen by 23.8 per cent. and now stands at 42,545 which probably represents about 18 per cent. of the population. Special grants were made for the education of the poor in the cities of Calcutta and Madras and there is now little reason to suppose that any children of the domiciled community go uneducated. It is proposed to

establish a training college in southern India somewhat similar to the training class at Sanawar. The proposal to continue the special education provided for Europeans through the college standards has not met with approval. But an important development has been the establishment of an Anglo-Indian hostel for college students at Allahabad. This movement augurs well for the future of the community and a great opportunity is now offered for employment in India whether in the public service or in private concerns by the practical cessation of any recruitment from England. Notwithstanding the generosity of government, the education of this community continues to be characterised by a large amount of self-help in the nature of fees and subscriptions and 61.7 per cent. of the cost of a pupil's education is met from private sources. The Laidlaw Fund, opened shortly before the commencement of the quinquennium, now totals £100,000.

56. The difficulties which have opposed the expansion of education and especially higher education among Muhammadans are gradually giving way. The percentage of Mussalman pupils to those of all communities bears almost the same proportion as the Mussalman population to the entire population, while the increase among Muhammadan pupils has been 17.6 per cent. as against 15.8 per cent. for those of all creeds. It is particularly encouraging to find that the community is beginning to take a larger share in institutions for higher education. The number of pupils in arts colleges increased by nearly 60 per cent.; that in professional colleges by over 73 per cent. and that in secondary schools by 29 per cent. Even so, the number of Muhammadans in these institutions is incommensurate with the importance of the community. In 1913 the Government of India issued a circular to local Governments with a view to stimulating efforts. Conferences have been held as a result. Plans have been elaborated and grants have been allotted. Among special incidents of the quinquennium may be noticed two which have taken place in Bengal. The Mohsin Fund, a considerable portion of which was previously utilised for the maintenance of the principal *madrassas*, has now been freed for the establishment of Muhammadan scholarships, government undertaking the upkeep of the institutions. Secondly a reformed curriculum has been framed for the majority of these *madrassas* which will render them more suitable to modern conditions. In Bombay a lakh has been sanctioned for Muhammadan education in Sind—to be used mainly in the creation of scholarships. Special inspecting agencies and training institutions have likewise been established in several provinces.

57. There are few more important or more difficult tasks than the improvement of the condition of the wild tribes and depressed classes. The Government of India addressed local Governments generally during the period *classes*. regarding these communities. For the first time it has been possible to include in this review an enumeration of the classes affected, their number and the number of those receiving instruction. It is hoped that this may prove a useful basis for future operations. But it is not to be supposed that efforts have been nugatory in the past. The resolution on the Bombay report speaks of the success which has attended the policy of concentrating members of the aboriginal communities in special settlements, where they imbibe the rudiments of civilisation. Large sections of the depressed classes, such as the Panchamas of Madras and the Namasudras of Bengal, can no longer be regarded as peculiarly illiterate. Here and elsewhere the missions have done praiseworthy work. If results on the whole appear small, these examples are not to be forgotten and the efforts which Indian Societies are now making on behalf of their less fortunate fellow-countrymen constitute a happy augury.

58. Among measures which affect different branches, the provision of *Scholarships*. scholarships has been made more liberal. Apart from State scholarships tenable abroad, the total spent on this object in India has risen from R13,40,222 to R21,65,718 a year. Of this sum, R12,63,482 comes from provincial revenues, R3,80,000 from local and R52,982 from municipal funds, while the rest is derived from private sources.

In Bengal a portion of the Mohsin fund (an endowment for the benefit of Muhammadans) was as already stated set free for scholarships. It was necessary in 1912 to divide the Bengal scholarships between that presidency

and Bihar and Orissa. The list of scholarships drawn up for the latter province was a liberal one, the number in some cases almost equaling that previously allotted for the combined province. But it is considered that the number of primary and middle scholarships is insufficient, their value too small and the term of their tenure too short; new proposals have accordingly been made for that province which will add £80,000 to the annual expenditure. A number of new scholarships were created in Assam, largely for the encouragement of Muhammadans and backward races.

59. The State scholarships for study abroad were increased by the addition of a scholarship tenable by Indian women for three to five years, of the value of £200 a year, for professional training—mainly in medicine or teaching. The value of certain of the previously existing scholarships was raised from £200 to £250 a year in the case of students who enter a college at Oxford or Cambridge. The value of the oriental scholarships also was raised from £150 to £250 in the case of such students and to £200 in the case of others. The conditions governing technical scholarships were under consideration throughout the quinquennium and were revised soon after the close, with a view to affording a longer and more practical course.

The quinquennium was marked by considerable agitation regarding certain alleged grievances of Indian students in the United Kingdom. This question is dealt with in paragraphs 191 and 192.

Buildings.

60. Thanks to the imperial grants and to private munificence, there has been considerable building activity, of which brief accounts are given in the appropriate chapters. Progress has also been made in the framing of plans suitable for educational purposes. The total expenditure on these objects during the quinquennium was 789 $\frac{3}{4}$ lakhs—nearly 300 lakhs in excess of the imperial non-recurring grants. As enquiries are frequently made regarding the kind of institutions on which this expenditure is incurred, Directors were asked, if possible, to supply this information for the quinquennium. Some have done so; but some have been able to show figures only for 1916-17. In that year 27.82 lakhs were spent on colleges, 45.99 on Anglo-vernacular secondary schools, 37.09 lakhs on primary and middle vernacular schools and 8.50 lakhs on special institutions.* Details are shown in appendix II. The illustrations at the end of this volume show a few of the buildings erected during the quinquennium.

Expenditure on buildings is sometimes criticised. It is necessary, however, that pupils and teachers should be protected from rain and sun, and, in institutions above the primary, something more than a bare roof may be expected. Mr. Hornell points out that, paramount as is the need for more capable teachers, the effective teacher is certainly handicapped by inadequate class rooms and equipment and that there is a close connection between education and the standard of life. He gives a gloomy picture of the present condition of secondary school buildings in Bengal. They are described as unsuitable for school purposes, insanitary and over-crowded.

Libraries.

61. The importance of libraries as factors in the education both of the pupil and of the adult is apt to be overlooked when set text books and examinations dominate the curriculum. There has been some progress; but one could wish it had been greater.

The Madras University library, which is still housed in the Connemara Public Library but for which a separate building is now planned, received nearly 6,000 new volumes during the quinquennium and now contains 19,000. In 1914 it was thrown open to the public and has been used to a considerable extent. The University of the Punjab received a valuable gift in the shape of the Azad Collection of manuscripts presented by Agha Muhammad Ibrahim of Montgomery. The university library was overhauled and arranged by an American expert, who also delivered lectures on modern library methods to those interested in the work.

College libraries vary enormously—as do colleges themselves. Not many are possessed of large or up-to-date collections. An important college like that at Patna, though possessing a good library, receives an annual grant of only

* This figure refers only to provincial expenditure. For this and other minor reasons the total of these figures is not given in general table IV.

R1,000 for its up-keep and the principal naturally complains of its inadequacy. School libraries are often deplorable and one of the Bengal inspectors states that they are composed of second hand books which, to judge from their miscellaneous titles, might have been bought by weight, and presentation copies of inferior text-books. In the libraries he examined this inspector discovered 'Gunshot wounds; their treatment,' 'Oriental crime,' 'History of the idea of the Devil and Witchcraft in all countries' and 'What and when to drink (a volume of recipes).' There is no doubt that many such libraries are full, if not of trash, at least of books which do not make interesting or suitable reading for school boys. In some provinces improvements are being effected. In Bombay, boys' libraries are being established with government aid as distinct from school libraries; they contain illustrated books of stories, fairy tales, travel and adventure. In Bihar and Orissa each district high school received in 1914-15 a sum of R500 over and above its usual annual grant. In Assam annual grants have been sanctioned for government high schools at rates from R125 to R175 according to the number of sections. The provision of attractive books which can be read with ease and interest is undoubtedly a matter of importance.

62. But the principal reform of the quinquennium has been the raising *Pay of teachers*. In the resolution of 1913 the Government of India recommended a minimum of R12 a month for trained teachers in primary schools and a scale of R40 to R400 in government secondary schools. The measures which have been taken are detailed in paragraphs 217 and 271. The average pay of those in government employ is that of the services to which they belong and is shown in paragraph 128. That of teachers in other employ is shown in paragraph 130. It is impossible to compute the average increase in emoluments. But a fair idea may be obtained by making a comparison of the number of teachers with the direct expenditure on educational institutions, which is made up mainly of the pay of the staff. Such a comparison shows that, while the number of teachers has increased by 30 per cent. in the quinquennium, direct expenditure has increased by 47 per cent.; or, to put it in another way, while the direct expenditure in 1911-12 gave an average incidence of R250 a year per teacher, that in 1916-17 gives an average incidence of R282.

IV.—*Special developments.*

63. This last section attempts to deal with points which were specially *Broader* emphasised in the resolution of 1913—those vital aspects of education which *aspects of* affect health, character and the many-sided development of the mind—and to *education*. consider to what extent public opinion, which is an essential factor in reform, has moved in these and other directions.

64. There are few subjects which attract so much public criticism as *Conferences*. does education. This is true of other countries as well as of India and in itself constitutes a healthy sign of growing interest. Elsewhere such criticisms are levelled not only at the central government, but at local authorities and private associations. In India the government bulks large by tradition, is regarded as the root of good or evil and must bear alone the impact of public opinion. Sometimes, too, educational controversies assume the guise of racial questions. It is apt to be forgotten that the number of Europeans engaged on educational work is very limited, that government has delegated many of its functions to local and other bodies and that a policy of reliance upon private effort has been steadily pursued. Nor is sufficient weight always given to the fact that non-official opinion is freely consulted regarding general lines of policy.

The quinquennium has been marked by the calling of a large number of conferences. A conference of Directors was held at Delhi in January 1917. His Excellency the Viceroy opened the proceedings and the main discussions were public. Important subjects, such as the constitution of the new universities at Patna, Dacca, Nagpur and Rangoon, the educational rules and grant-in-aid code in Madras, the pay of primary teachers in the Punjab, the general development of primary education in the United Provinces and Bihar and Orissa, engineering and industrial education and the establishment of a

school leaving certificate system in the latter province, the development of colleges and technical education in Assam, as well as, in most provinces, the special requirements of the education of girls and of Muhammadans, moral and religious instruction and school hygiene, have formed the subjects of discussion to which non-officials have been invited. A representative conference on the education of the domiciled community was held at Simla in 1912. There are few matters of importance on which a decision is made without full consideration of public opinion.

Courses and methods.

65. The growth of new interests, the introduction of more varied curricula and the establishment of examinations other than those which are designed to test fitness to pursue the ordinary arts courses are gradually providing a wider scope of subjects. In respect of courses, the chief feature has been a still further recognition of the claims of science, illustrated by the appointment of science inspectors, the creation of a faculty of science in the University of Bombay, the completion of the Royal Institute of Science in the same city, etc. The popularity of science courses is noticed in the Punjab, where one college has opened classes in industrial chemistry. At the Rangoon college the best students are reported to select science as their subject. The deliberations of an important committee on the inculcation of the imperial idea in Burma foreshadow certain changes in the course in that province, and those of the numerous committees which have met to consider the education of girls indicate the desirability of some modification of the curricula prescribed for them.

In order to rationalise methods, new avenues of instruction are being utilised and it is hoped that education will gradually become more realistic and less divorced from the actual life of the pupil. Attempts have been made to enlist the service of the eye and the hand in the process of instruction.

(a) Visual instruction.

66. Greater use has been made of visual instruction as a means of widening the pupil's outlook and impressing facts upon his mind through a process different from that of mere memory. The special efforts made in this direction in Bombay were the work of the Director, the late Mr. W. H. Sharp. In most provinces inspecting officers and the larger institutions are now provided with lanterns and slides. In Bombay each group of three board primary schools now possesses a set of stereoscopes and stereographs. Moreover students, especially of training institutions, are sent on excursions to places of interest in different parts of India.

(b) Manual training.

67. In 1913-14 the Government of India distributed seven lakhs non-recurring and one lakh recurring for manual training. The subject has not made much advance in Madras. Preparation had been made in *Bombay* for the introduction of sloyd and a number of teachers were trained. The financial position checked progress; it has been found possible to introduce the work into only a few schools; and the suitability of sloyd for Indian conditions is doubted. In *Bengal* it was decided to apply the available funds to the provision of a workshop and appliances, a teacher on Rs 50 and material at the rate of Rs 25 a month in each of 25 schools. Work has actually commenced at 19 schools and Mr. Hornell considers the keenness with which it is done as an encouraging feature and that its extension is a condition of any real advance in secondary education. The subject is taught in a certain number of schools in the *United Provinces* with varying degrees of success and popularity. A manual training centre has been opened at *Lahore* to which pupils of various schools come on different days of the week.* In *Burma* a special deputy inspector has been appointed to supervise the teaching of the subject, which is carried on in 44 schools. Classes have been opened at a few schools in *Bihar* and *Orissa* where, though attendance is optional, boys appear anxious to join them, and at two schools in *Assam*. The kind of manual work generally adopted in India is either sloyd, some adaptation of sloyd to Indian conditions, or some system of exercises in wood work. Metal work is hardly attempted save in the technical schools.

In primary schools simple forms of hand-work, such as clay modelling and paper folding, are generally done.

* *Report of the Inspector No. 1, Drawing and Manual Training in Punjab Schools*, by J. Y. Bhambhani.

On the whole, progress has not been so rapid as might have been hoped. There are difficulties of money and staff, and manual training, not being ordinarily prescribed for the matriculation, is consequently apt to be regarded as waste of time.

68. A point connected with method is the demand made that vernacular *The medium* should be substituted as the medium of instruction up to a higher stage than *of instruction*. at present. A conference was summoned at Simla just after the close of the quinquennium to discuss this question. Allusion to the subject is made in paragraph 237.

69. In the last review it was observed that some outcry had arisen *Religious and moral instruction.* against the purely secular character of the instruction imparted in the public schools. The attitude of State neutrality in India towards different religions takes the form of abstention from religious teaching, with exceptions presently to be noted, in publicly managed schools and non-interference with such teaching in privately managed schools, even when they receive aid from public funds. It is accordingly open to any school manager to introduce any form of religious instruction which he desires without foregoing the claim which he might put forward for a grant-in-aid. In Madras definite religious instruction is given in a number of privately managed schools. In the United Provinces, Bihar and Orissa and Delhi it is given in many denominational schools. Generally speaking, however, advantage is not largely taken of this privilege save in schools managed by Protestant missions. Secondly, certain relaxations have been permitted in publicly managed schools. In the United Provinces they may impart religious instruction for one hour a week to the children of parents who desire it, though the ordinary staff may have nothing to do with the instruction. In the Punjab instruction is allowed in board schools on similar conditions and on the further conditions that it is given out of school hours, in accordance with rules laid down by the local body and without imposing any charge on public funds. In Burma again religion may be taught in State schools, the conditions being generally similar to those enforced in the Punjab, the approval of the teacher by the inspector being also required, and ceremonies or acts of public worship in the school precincts being prohibited. Here (where practically all the pupils are Buddhists) the scheme is pronounced to have been a success. In the Punjab the results are stated to have been uncertain. In the Central Provinces and Assam there has been some relaxation in favour of religious instruction, mainly for Muhammadans. But very little advantage has been taken of it. Hence some doubt was cast upon the depth of the demand for religious instruction; and the difficulties in the way of its introduction were admittedly great, especially in the case of Hinduism.

70. The question both of religious and of moral instruction was discussed at the Educational Conference at Allahabad in February 1911 and subsequently, at the request of the Government of India, in most provinces. As regards moral instruction, a conference had already been called in *Bombay* in 1910. Mr. Gould had been invited to give demonstrations, a text book has been prepared and the subject was introduced, apparently with some success, in those training institutions and secondary schools whose teachers had had an opportunity of attending Mr. Gould's lectures. A consultative committee was also constituted, whose original enthusiasm, however, appears to have waned. A syllabus has been drawn up in *Madras* and action is contemplated. The teaching of temperance has been organised in *Burma* and persuasion against the habit of smoking in schools has had effect. The committee which met in *Bihar* and *Orissa* advised the devotion of a period a week to moral instruction, and this has come into force. The committees in *Bengal* and the *Central Provinces* considered that direct moral instruction is valueless, that such instruction should rather be the natural outcome of school life and discipline and that illustrations of high moral character may be used effectively. There is a general feeling that the character and conduct of the teacher is the most important point and that there is danger of the teaching becoming merely formal. The Indian boy is indeed probably more susceptible to aphoristic precepts than the European. But the value and reality of such a system become doubtful when we find him exhorted not to speak unpleasant truths or assured from the walls of his class room that might be right.

The local Governments and provincial committees exhibited considerable variety of opinion regarding the possibility and efficacy of religious instruction. The provinces in which an advance was most confidently recommended were Bengal and Bihar and Orissa. The former advised that religious instruction should be initiated, that the parents of a boy entering the school should be asked if they desired him to attend the religious classes and that preference should be given to members of the regular staff as religious instructors. In Bihar and Orissa experiment was advocated in selected areas; but difficulties have arisen and nothing has been done.

*The con-
science clause.*

71. Much less has been heard from the point of view of the public about religious instruction during the period under review than in that which preceded it. Interest has begun to centre in the question of such instruction in mission schools and the desirability of introducing measures which, if they did not abolish, would at least tend to curtail it. The grant-in-aid codes ordinarily contain no conscience clause for Indian schools. Exceptions are the European school codes, save that of Bombay, and the rules for aid given by local bodies in Bihar and Orissa. These contain a conscience clause, confined in the latter to single-school areas. Protestant and some other missions ordinarily make attendance compulsory at Bible instruction. It is urged on the one hand that the absence of a conscience clause is a breach of religious neutrality and is opposed to the practice which exists in the United Kingdom and even in India as regards European schools, that public funds are being utilised for the support of institutions which insist on instruction in a faith which is not the ancestral faith of the pupils, and that the present arrangement tends to destroy their self-respect. On the other hand it is claimed that the religious instruction imparted is salutary in its effects; that it is largely non-dogmatic; that pupils and their parents have no real objection to it; that if they have the pupils can remove themselves to another school or the parents can take steps for the foundation of such a school; that the agitation is largely artificial; that compliance with it would merely put a stumbling block in the way of those who appreciate the instruction and would be subversive of discipline; that some of the mission bodies at home would stop their subsidies and that some missionaries in India would close their institutions, with the result that India would be deprived of the admitted benefit of missionary effort in education and the missions of the privileges which they have so long enjoyed and which induced them to commence their operations and to sink capital in land and buildings. A compromise, which was suggested as long ago as 1882, adopted by the Commission of that date but rejected by the Secretary of State, is the recognition of single school areas, *i.e.* of areas which are served only by a Protestant mission school and where accordingly the absence of a conscience clause may be oppressive and should be removed. This idea has now been revived by some of those who have interested themselves in the controversy and is opposed by others as no real concession of the principle of freedom of conscience and as liable to bear hardly on children dwelling in multi-school areas who can find no room in non-mission institutions.

Boy Scouts.

72. A method of influencing character is the encouragement of organisations such as the Boy Scouts. In European boys' schools, the Boy Scouts Association has gained a firm hold. Eighteen troops are recorded in Bengal. The system is in full operation in the United Provinces, in several schools in Burma and elsewhere.

Girl guides also are found. Nearly every school in Calcutta possesses a company and the association includes Indians as well as Europeans.

Here and there enthusiastic officers have devised local scout systems. Such is the system in the schools at Belgaum and Karwar, the main objects of which are to inculcate a spirit of practical morality, to bring masters into closer touch with boys, to give a chance of distinction to those who cannot win prizes in the class-room, etc. Each scout takes a vow and passes a test in order to rise to the higher grades of the organisation in such subjects as games, cycling and gardening. Such also is the house system at Karachi, which is intended to secure that all, and not merely the most capable, should participate in games and feel some interest in their result. Mr. Chapman, I.C.S., has introduced a League of Honour in the schools of Berar. Various

societies with similar aims exist in the Central Hindu Collegiate school at Benares.

At the end of the quinquennium the Government of India addressed local Governments on the subject of the Boy Scouts movement in schools for Indians. It was pointed out that, while the formation of a body of scouts calls for no interference by government, yet officials when consulted should recommend the adoption of the general principles underlying the Boy Scouts Association and make sure that the commencement is made on sound lines, particularly in the matter of scout masters. At the same time the Government of India desired to see the establishment of troops in selected government schools. The association is at present unable to incorporate Indian troops in its own organisation, but is ready to give assistance and advice through its officers. The main difficulty is the paucity of scout masters.

73. The Government of India allotted an imperial grant of 25 lakhs *Hygiene and non-recurring* for school hygiene and invited local Governments to frame *physical* schemes. The non-recurring grant has facilitated the purchase of play-training grounds, etc. But further development depends upon recurring resources. The scheme for medical inspectors in Bombay has had to be postponed. But staff has been appointed in the Punjab; and elsewhere considerable use is made of the regular medical staff. Such inspection is very necessary. It is reported from Madras that in one school inspected 44 per cent. of the boys were found to have defective eyesight; and in the Punjab, where medical inspection is carried out on a largo scale, this is the case with 30 to 50 per cent. of those examined. Despite the regulations of the University of Calcutta on the subject, the recognised high schools, says Mr. Hornell, especially the unaided, continue to defy almost every principle of sanitation and hygiene. Considerable efforts have been made, by means of the imperial grants, to provide or improve play-grounds. This is difficult in the case of city schools. In Calcutta only six out of 15 colleges and 27 out of 57 high schools have any sort of playing space. Widely varying views are expressed as to the value of inter-school tournaments. But there can be no doubt that the introduction of organised games has had on the whole a healthy effect.

74. In some government colleges and also in some of the privately (a) *medical* managed type, such as the Dayanand Anglo-Vedic College at Lahore, medical *inspection* officers are maintained to look after the health of students. These officers are sometimes entrusted with the care of schools and hostels in the city. A certain amount can be done in towns. But the problem of medical inspection in village schools is a difficult one.

In the Corporation elementary schools of *Madras* the medical inspection of pupils is carried out by a member of the Indian Medical Service and by a lady. A scheme has been sanctioned for the appointment of five medical officers in *Bombay* presidency on Rs 500—50—800 (non-pensionable). These officers are to be under the department of public instruction and would inspect (but not treat) the children in publicly managed and aided secondary schools for boys, training institutions and their practising schools. The scheme is held up owing to financial stringency. In the meantime, weighing machines have been supplied to government secondary schools and training institutions, and the measurements and eyesight of each pupil are recorded every six months, physical defects being reported to parents. In the *Punjab* six assistant surgeons have been appointed as medical inspectors of schools. They annually visit every government, board and aided Anglo-vernacular school under their charge and examine each pupil in the secondary departments. Results are recorded and medical history cards are kept. Serious defects are brought to the notice of parents, but it is observed with regret that advice is frequently ignored, and headmasters are reported as not realising their responsibility for the health of pupils. A certain amount of inspection both of schools and of pupils has been carried out in *Burma*. In 1916 arrangements were made in *Bihár* and *Orissa* for a general medical survey of pupils in high schools at each district headquarters twice a year and for other high schools where possible. These are being carried out by the civil surgeons with the help of assistant surgeons, who also regularly visit all high schools near their hospitals. The inspection of buildings is entrusted to health officers in the municipalities where these exist, and similar duties are carried out by the deputy sanitary commissioners. A number of cases of defective buildings and of boys requiring treatment have been brought to light and necessary action has been taken. In the *Central Provinces* all schools in dispensary towns are inspected once a month by the sub-assistant surgeon, who examines the pupils and recommends medicines. In some districts travelling dispensaries and itinerant doctors treat the more remote schools. All hostels are under medical charge. Government and

board schools in Assam which are not more than two miles from a dispensary are inspected by the local assistant or sub-assistant surgeon, physical defects or diseases are brought to notice and the results have been beneficial. Medical inspectors have been appointed in two districts of the *North-West Frontier Province* for the examination of buildings and pupils, and medical treatment has been applied to many boys suffering from eye complaints and other diseases.

Although the achievement of the quinquennium has not been so great as might have been hoped in normal conditions, this account of the action taken has been inserted at some length because of the importance and the novelty of the subject in India.

(b) *sanitary examination of building-plans.*

75. Building regulations based on hygienic principles have been laid down in *Bombay* and plans of all buildings have to be submitted for examination from the sanitary point of view. The committee which considered the subject of hygiene in *Bengal* proposed the appointment of a special Deputy Sanitary Commissioner, who would inspect buildings and draw up directions for lighting, ventilation, etc. In *Bihar* and *Orissa* the inspection of buildings, as already stated, is carried out by health officers and deputy sanitary commissioners. Plans of buildings costing over Rs500 are examined by the Sanitary Commissioner, and of those costing less by the Civil Surgeon. Large sums have been spent on the acquisition of land for rendering school sites more healthy. Standard plans for different classes of schools and for hostels have been published in the *Central Provinces*.

(c) *prophylactic measures against disease.*

76. In some districts of the *United Provinces* much progress has been made in extending the use of quinine as a prophylactic. Wherever introduced it appears to have produced satisfactory results and its efficacy is now generally admitted by parents and children. In the *Central Provinces* various protective measures have been taken. Though vaccination is compulsory only in municipal areas, the number of unvaccinated children is very small.

"Pamphlets on village sanitation and leaflets on epidemic diseases have been supplied to all schools and were explained to pupils. Almost every school boy now knows the precautions to be taken in epidemics of plague, cholera, malaria, small-pox, etc. The number of teachers and pupils who voluntarily offered themselves for inoculation against plague has risen steadily. Systematic provision is made for the sale of quinine by school masters, which has grown very rapidly. An interesting experiment was made of quininising school children in hyperendemic areas of some districts. In Seoni and Betul districts the Deputy Commissioners inaugurated most valuable work. The children were given doses of quinine by teachers as instructed by medical officers and the results were recorded in registers opened specially for the purpose. The experiment yielded satisfactory results. Smoking is strictly prohibited by departmental rules which prescribe corporal punishment for pupils found smoking on school premises."

It is also recorded that during visitations of plague many schools are maintained near health camps under trees or in temporary structures provided by government, the boards, committees, or private bodies, and a good percentage of attendance was kept up.

(d) *the teaching of hygiene.*

77. Hygiene is prescribed for the vernacular final certificate in *Bombay* and as a subject of the new science syllabus in secondary schools. A new book on the subject has been compiled. Lessons on temperance on the lines of the Board of Education's syllabus are given in government secondary schools. Arrangements have been made in *Bengal* for lectures at high schools and first grade normal schools, delivered by assistant surgeons, on hygiene and sanitation, especially the prevention and cure of malaria. In some districts of *Bihar* and *Orissa* lantern lectures are given on malaria, and at these lectures quinine is distributed free. A series of lectures is also given at the larger training institutions and it is proposed to extend this practice to high schools. First aid and hygiene classes have been opened at the normal schools in the *Central Provinces*. Hygiene lessons are prescribed in the normal schools of *Isam*, in vernacular schools for boys and in both vernacular and English schools for girls. Courses of instruction have been given to teachers in the *North-West Frontier Province*.

First aid, etc.

78. First aid is included in the science curriculum for standard VII in *Bombay* and classes have been organised in all government and many aided high schools with the co-operation of the St. John Ambulance Association.

Elsewhere it is voluntary. In 1916-17, 21,381 teachers and pupils went through courses of instruction in first aid and 126 in home nursing; 871 and 100 certificates were awarded respectively in these two subjects. The number of certificates was small in comparison with that of those under instruction. But it is probable that the figures of examinations in March 1917 and in subsequent months will, when fully collected, show considerable improvement.

79. The hostel system is important because it facilitates the attendance at *Hostels*. institutions of pupils who do not reside at large centres, offers a safeguard against the influences which assail students of the *mofussil* when they repair to the cities, fosters community of life and affords opportunities for management and responsibility on the part of the senior boarders. There has been considerable expansion of the system during the period. The number of hostels has risen from 2,796 to 4,045, and of boarders in them from 107,383 to 152,570. Details regarding the prevalence of the system in different kinds and classes of institutions are found in general table VIII. The calculation of recurring cost previously given in that table had been found to present difficulties; hence only the capital cost is now shown, amounting to nearly 23 lakhs in 1916-17.* The Government of India gave grants for hostel construction during the quinquennium amounting to Rs. 1,32,82,000 and a recurring grant of 5 lakhs.

80. Hostel life is coming to be popular in colleges. The Punjab report speaks of the marked preference shown by the student population for residence in hostels and the effort made by the managers to encourage this feeling and to provide accommodation under their own immediate supervision. Many colleges are now practically residential and reports emphasise the good result. The system is coming to be regarded not merely as a convenience but as contributing wholesome elements to a general education. The necessity of proper supervision and the desirability of providing on the spot for the residence of the staff, are also realised. Nevertheless, in India as a whole, only 28 per cent. of the students in colleges reside in hostels. In Bengal the percentage falls to 13. In large cities like Calcutta many of the students live with their parents and guardians (a feature which is common in smaller centres also) and the difficulties of finding suitable accommodation for immigrant students are very great. Notwithstanding that imperial grants aggregating 57 lakhs (including a grant of 10 lakhs to the university and excluding a recurring grant of 1.32 lakhs) were allocated to Bengal for hostel construction and that the Government of Bengal assist in paying the rent of 'messes' (hired houses where students reside), the condition of things cannot be regarded as satisfactory in Calcutta. The university permits, as an alternative to residence in hostels or with guardians, attached messes, which are supported from public funds and confined to the students of one college,† and unattached messes, in which these conditions are not fulfilled. Unattached messes are popular, especially with students who come from the same locality but read in different colleges. They are also stated to be cheap and convenient for those of the same caste—statements which are contradicted. They are but little supervised and the measure of independence which they offer may, Mr. Hornell suggests, be a reason for their popularity with students who, as a *mofussil* headmaster put it, are attracted to Calcutta by the amenities of the metropolis. Residence with guardians is obviously open to abuse, and sometimes one student is the guardian of another. Thus the existing regulations do not ensure satisfactory residence and supervision: and even so, they are not fulfilled. An enquiry made early in 1917 showed that 4,584 students in Calcutta were living under conditions which had not received the approval required by the university regulations; this number included 965 students who were not members of colleges but reading in university post-graduate

* Instead, Directors have supplied calculations of the cost of living in hostels. This varies considerably according to the locality and to the kind of diet adopted by the student. In Madras the average cost in a college is Rs. 11 a month, in a secondary school Rs. 6. In the large Victoria hostel in Madras city the cost is Rs. 20. In Calcutta the average in hostels and attached messes is Rs. 14 to Rs. 15 and in unattached messes Rs. 16. In the Punjab the cost in a college hostel varies from Rs. 7 to Rs. 27. In Patna the cost in a college hostels is Rs. 8 to Rs. 12 and in a school hostel from Rs. 7 to Rs. 8. In Assam the cost in high school hostels (Rs. 10 to nearly Rs. 13) appears to be higher than that in college hostels (Rs. 8 to Rs. 11). In the case of European schools the cost is generally higher—Rs. 15 a month in the Central Provinces, Rs. 14 to Rs. 26 in Madras and up to Rs. 36 in Assam.

† The distinction between the attached and the unattached mess has been weakened by a regulation which, in special and exceptional cases, permits students of other colleges, or a pupil of a recognised school who is nearly related to a member of the mess, to reside in an attached mess.

classes. Mr. Hornell indeed considers the residential problem in Calcutta to be insoluble in existing conditions of college life. In some towns, e.g., Dacca and Bankipore, arrangements have been made for organisation and supervision by special officers or by committees.

In secondary schools the problem is less pressing, because these are more widely distributed and hence pupils can generally attend from their homes. Nevertheless, nearly 8 per cent. of the pupils now live in hostels. The proportion of primary school pupils who live in hostels is naturally small. In Madras, where an elementary school may contain higher stages, there are over 10,000 pupils in hostels. They are fairly numerous in Burma and in certain hilly tracts, like Kumaon, where hamlets are scattered and difficult of access, primary school hostels are a necessity.

Discipline.

81. Of discipline generally it may be said that positive acts of unruliness (with some regrettable exceptions to be noticed) are rare. The Indian student is ordinarily hard-working and quiet. But the standard of discipline exacted in many institutions is not high. There is a tendency to question orders which seem to involve any inconvenience and to seek for excuses and extenuating circumstances. It is significant that Mr. Südmersen regards it as a matter for congratulation that the presentation of petitions by school boys for the cancellation of orders which they do not approve is growing less frequent. The same authority writes as follows. "Complaints are from time to time made that the habits of school boys and their general demeanour are in sharp contrast with those of their parents, that the old ways are dying out, and that the new ways are bad ways. Some changes are inevitable, but the evils of a little knowledge are admittedly great evils. In a period of transition, when knowledge remains but the possession of a few, it undoubtedly tends to inflated ideas and to an undue and often impertinent assumption of superiority."

82. Owing to the multiplicity of secondary schools and laxity regarding the rules of transfer, it is easy for a pupil who feels himself aggrieved by a punishment or is refused promotion to retaliate by leaving the school, by bringing reckless charges against members of the staff or by writing anonymous complaints to those in authority. The Director in the Punjab complains that teachers are sometimes privy to such conduct; and it is to be feared that it is sometimes more than connived at by parents, who do not always instil into their children a due feeling of respect for teachers and threaten a boy's removal when he is visited with punishment or detention in a class. Nor is the position of the teacher strengthened by school managers, who desire to increase numbers and fee receipts and in some parts of Bombay employ touts to lure pupils from one school to another. Hence teachers are not encouraged to maintain discipline, especially when their salary or position depends on the amount of fees brought in. A Bombay inspector, who questioned young teachers as to how they punished, found that the punishments they gave were puerile, and one, asked what he would do if a boy threw a book at his head, said that he would warn him.

83. Some of the reports speak of serious breaches of discipline. There were strikes in two government high schools in Burma, caused by firm action, succeeding a period of easy discipline, by new principals. This action was in one case directed against the use of dishonest means in examinations. In neither case did the principal receive from his staff as a whole the support he had a right to expect. In other cases the outbreaks are traceable to political or allied causes. Attempts have been made to attract students to meetings where intemperate speeches are made and otherwise to inoculate them with sentiments which are liable to culminate in violent action. Thus Mr. Mayhew says that in Nagpur political meetings and agitation have occupied the students' minds to a most undesirable extent. "Political speakers have found in the students an audience easily moved by eloquence to sympathy and applause and students have obtained from the meetings that excitement and stimulus which adolescence demands." In view of the violence assumed by the Home Rule agitation it was found necessary to issue orders in several provinces prohibiting the attendance of students and pupils at political meetings for reminding principals and headmasters of their responsibilities in the

matter of discrimination between suitable and unsuitable meetings. These rules caused some disorders in the Central Provinces and Madras, which were encouraged by agitators. The excitement, however, appears to have passed away.

84. The part played in anarchist outrages by pupils and ex-pupils of certain educational institutions in Bengal (and to a lesser extent elsewhere) is a lurid one. The promoters of disorder regarded the schools as a favourable ground for recruiting agents of their designs and an organised attempt was made to corrupt pupils through senior students and teachers who were insinuated into appointments for this very purpose.

Mr. Hornell mentions much indiscipline in Bengal. "This took on a definite political form in 1914; it was aggravated by the wide and reckless dissemination of seditious leaflets throughout the presidency about this time. The campaign was clearly designed to work up the student community against British rule. Many students were arrested at different times and most of these have since been interned." He records the murder of two headmasters of government high schools, a pupil having in one of these cases been convicted of the crime, and four strikes in Calcutta colleges, two of which took place in government and two in privately managed institutions. As regards the strike in the Presidency College, he states that the Students' Consultative Committee, instituted in 1913 to bring the principal into touch with the opinions and needs of the body of students, played an unworthy part and that it is regrettable that the first attempt at a students' constitution has failed.

85. Efforts have been made during the quinquennium to enlist the interest *Attitude of the public.* of parents by meetings and by the circulation of reports on progress and conduct. Remarks made by the Directors appear to show that the efforts made in this all-important direction have not been thoroughly successful. One of the provincial reports observes that, as a controlling agency, parents limit their desire for control to the promotion list and the headmaster's responsibility to the examination results, but in other matters assume no responsibility themselves and are surprised at its assumption by the headmaster. As a matter of fact, the parent is usually anxious that his boy should be well-educated, that his character should be properly formed and that he should be brought up in healthy surroundings. Circumstances, however, are against him. He is naturally easy-going with his children and is apt to pay considerable attention to their point of view, especially if they happen to be more highly educated than himself. The teacher does not command the respect which is his due; he is often poorly paid and dependent on fees; his advice, if indeed it is given, is too often ignored. The boy has got to qualify for a profession by passing certain examinations. It is the duty of the school to enable him to pass them; and any failure in this respect and the addition of any activities which will interfere with his efforts to that end are deprecated. Finally, the parent reads his newspaper and too often gathers therefrom an erroneous view of education.

For there is no denying the fact that, while public interest in education has increased, public opinion, so far as it is expressed, often remains crude or unformed. Press utterances are frequently actuated by vested interests or political motives. The criticism of measures of reform is attractive and the student community is a valuable political asset. There is a tendency to lower standards and to oppose their improvement. If the percentage of success at an examination decreases, the university is blamed for depriving young men of the opportunity of acquiring knowledge. Publicists support pupils in acts of indiscipline, openly blaming the teachers and deprecating punishment. The resolution on the report from the Central Provinces, while recognising assistance given, notices the destructive nature of criticisms and the absence of any spirit of liberality despite oft-repeated professions of interest in education.

Below these manifestations there is a great body of sound public opinion. Nor is it always inarticulate. A not unimportant section of the press has, during the quinquennium, approached educational questions in the spirit of the educator. Appreciation has been shewn of genuine efforts to broaden the basis of instruction, and to improve the general conditions of college and

school life. This is a hopeful sign. But before a thoroughly sound advance can be made, it is essential that educational questions should be regarded on their own merits, that the teacher should come into his own and that due values should be set upon the respective merits of knowledge and of understanding.

CHAPTER IV.

CONTROLLING AGENCIES.

I.—General.

General system of control.

86. Education in India is not controlled by legislation. It is not incumbent on a parent to send his children to school. Nor is any person deterred from opening an educational institution. The Acts which embody the powers of local bodies lay upon them the obligation to provide facilities for primary education, or permit them to make provision for this and certain other forms of education. The universities have been created by Acts of incorporation and reformatory schools are governed by legislation. But up to the close of the quinquennium there were no Acts of more general application.

The Government controls education through codes of rules and executive orders. It maintains a few institutions. But the majority are managed by local bodies and private associations or individuals.

The department of education in the Government of India.

87. The Government of India does not control institutions,* but considers questions of general policy, correlates when necessary the lines of advance made in the various provinces, examines, approves or submits to the Secretary of State for India, schemes which are beyond the sanctioning power of the local Governments, and allots imperial grants. With a view to the administration of these increasingly important problems, the Executive Council was enlarged in 1910, by the addition of a Member for Education, whose portfolio also includes sanitation, local self-government, archaeology and other matters. The first member was Sir Harcourt Butler. During his absence in 1915, Sir Claude Hill and Mr. Ludovic Porter acted in the post. At the close of that year Sir Sankaran Nair assumed the membership. The department attached to the Member consisted in the first instance of two secretaries, one of whom (called the joint secretary) was in special charge of educational cases, while the other (aided by an assistant secretary) was in charge of the remaining branches. In April 1915, this arrangement was altered. It was felt that there should be an officer attached to the Government of India who would be able to tour and keep himself in touch with the local Governments without interfering with their discretion or interrupting the process of decentralisation. The secretaries were reduced to one, whose duty it is to submit all cases to the Member. A post of Educational Commissioner was created. This is really a revival of the post of Director General of Education, which was abolished in 1910. The Commissioner tours extensively, discusses questions with local Governments and advises the department on educational cases. At the same time a small bureau of education was re-established for the collection and dissemination of information, etc.

Provincial departments.

88. The actual administration of institutions, so far as it rests with the State at all, is in the hands of the local Governments, which are provided with departments of public instruction.

Local and private bodies.

89. The majority of institutions, however, are, as already stated, actually managed either by local bodies or by private agency. Generally speaking, the former are entrusted with primary education. The latter specially interest themselves in higher education. But many primary schools, too, are privately managed, the teacher often being himself the manager. The

* There are a few exceptions. The Government of India exercises in relation to the University of Calcutta the powers which are ordinarily assigned to a local Government. The other exceptions are in respect of research rather than of education.

departments of public instruction control such institutions indirectly, through the grant-in-aid rules, examinations, the award of government scholarships and so forth. They exercise a more direct control over the small number of government institutions which are to be found in each grade of education.

II.—*Direction and inspection.*

90. A provincial department of public instruction ordinarily consists of *Direction*, a Director, aided by an Assistant Director and a central office. This is the organisation now found in all larger provinces. Bihar and Orissa and the Central Provinces each obtained the services of an Assistant Director during the quinquennium. In Bengal, where work is particularly heavy, there is, besides the usual Assistant Director, an Assistant Director of Muhammadan education. In the United Provinces, in addition to the Assistant Director, the registrar of examinations also gives some general assistance. In order to cope with the additional work entailed by the imperial grants, special officers were temporarily attached for a time to the offices of the Directors in Madras and Bombay. In smaller administrations the arrangement is modified. There is no Assistant Director in Assam. Baluchistan, which up to this quinquennium was under the Director of the North-West Frontier Province, has now been separated and has a Superintendent of education, who is also headmaster of the Sandeman High School. In Ajmer-Merwara the Commissioner is *ex-officio* Director, with the principal of the local arts college as inspector. In Delhi education is under the general control of the Punjab Director, though there are now a district inspector and an assistant superintendent for female education in the province. It is intended to make Delhi and Ajmer-Merwara into a separate educational charge. In Coorg and Bangalore inspection is arranged from Madras.

91. A director of public instruction controls the inspecting staff and, so far as it is employed by government, the teaching staff; he allots grants and sees that the provisions of the local code are observed; and in these matters he acts as the agent of the provincial Government whose approval he is required to secure in affairs of importance. He advises the local Government as to the educational policy to be pursued and, when the policy is decided, is responsible for carrying it out. His proposals to the local Government are made through one of the secretaries to Government. The Secretary is a member of the Civil Service. The only exception is in the Punjab. There the Director is also an under-secretary and largely performs the functions of a secretary.

92. A notable move during the quinquennium has been the delegation of powers from the local Governments to the Directors and from the Directors to the inspectors and to college authorities. The reports from Bombay and Bengal make special mention of such delegations. It is needless to enumerate them all. They apply for the most part to matters such as the signing of bills, the granting of leave to subordinates, extended powers in respect of grants-in-aid, travelling allowance, re-appropriation between sub-heads, the sanction of pensions, purchase of equipment, etc. But the following changes, carried through in Bengal, deserve special mention. The Director can now appoint, transfer, dismiss and in other ways control members of the lower grades of the provincial educational service and officers of similar pay outside the graded service—a power which previously belonged to government. Inspectors can appoint to posts carrying initial salaries of Rs 100 a month or less outside the graded service. Governing bodies and principals of government colleges have been given a similar power and can also exercise it in grades of the services indicated by the Director, provided the pay does not exceed Rs 100, or, in the case of the Presidency, Sibpur and Dacca colleges, Rs 200 a month. This last delegation is of particular significance, since it marks a stage towards autonomy on the part of colleges.

93. During the quinquennium the death occurred of Mr. W. H. Sharp, Director in Bombay, and the retirement, owing to ill-health, of Mr. Wright, Director in the Central Provinces. Mr. Godley, Director in the Punjab, also retired on the completion of his service.

Inspection.

94. The inspecting staff is maintained by government, with the exception of a few officers appointed by local bodies. The organisation varies slightly from province to province. Generally speaking, the unit is the revenue division, with an inspector in the Indian or the provincial educational service. In Bengal, where schools of the secondary type are numerous, second inspectors are added, subordinate to the divisional inspector and ranging over a circle which comprises one or more districts. In the Punjab, too, the aim is to have two inspectors in each division—though this has not yet been fully carried out. Inspectors (or, in Bengal, second inspectors) are aided by assistant inspectors, to whom are delegated particular pieces of work or the inspection of special institutions. All these officers are closely concerned with secondary schools and training institutions (they do not generally inspect colleges). But the inspector is in general charge of all educational operations in his division or circle and naturally sees a certain number of primary schools. Besides inspecting, he advises the divisional Commissioner regarding general policy, distributes grants within his powers, controls the subordinate staff, etc.

The detailed inspection of primary schools, the smaller training classes, etc., is undertaken by deputy inspectors. Each district has a deputy inspector. He is a government servant and subordinate to the inspector, but is likewise the agent of the district board—a dual arrangement which, in practice, produces little or no difficulty. The deputy inspector again has under him sub-inspectors or assistant deputy inspectors, to each of whom is generally allotted a portion of the district. In Bengal the principal deputy inspector in each district is called the district deputy inspector, and posts of deputy inspector are interpolated between him and the sub-inspectors.

There are other inspecting officers—supervisors in Madras, assistant sub-inspectors and inspecting *pandits* in Bihar and Orissa and Bengal. The tendency has recently been to abolish these low-paid posts and to increase the number in the higher grades. But occasionally the numerical weakness of the superior staff and the inadequacy of funds necessitate the retention or even the creation of such posts.

Special inspection.

95. Inspectresses are employed as far as possible for the inspection of girls' schools. There are also special inspectors for European schools and for Muhammadan education and the teaching of Arabic and Persian. Mention is made of these agencies in paragraphs 403-404, 455, 490 and 308. Occasionally the inspectorship of European schools is combined with that of training institutions. In the Punjab the principal of the Central Training College is inspector of normal schools. The relations of the departments with technical institutions are described in paragraph 344.

Special subjects taught in the schools have begun, to some extent, to demand expert inspection and their claims have received further recognition during the quinquennium. Madras has two inspectors of manual training, the Punjab an inspector of this subject combined with drawing and Bombay an inspector of drawing. Bombay and the Punjab have each an inspector of science work in schools. The United Provinces has an inspector of Sanskrit teaching in English schools, an inspector of Arabic *madrassas* and another of *pathshalas*; Bihar and Orissa has an assistant superintendent of Sanskrit studies. Most of these offices are of recent creation. Work has improved under their care, but the distances to be travelled are great and it is sometimes difficult for the special inspector to do all that is required of him.

The organisation of medical inspection was hampered by the war. Paragraph 74 has described what it has been possible to accomplish. At Dacca and Bankipore there are inspectors of students' residences.

Organisation and methods.

96. The last review stated that efforts were being made to secure better co-ordination between inspecting agencies. These have been continued, and the relations of officers of different grades to one another, of the ordinary inspecting staff to the special staff for girls' schools or for Muhammadan education, etc., have been more clearly defined.

The work and responsibilities are largely distributed on a territorial basis. The reports contain clear descriptions of the organisation. The

following, from the Bombay report, may be taken as fairly typical, save that, in some provinces, inspectresses have now been invested with administrative functions.

"The educational inspector inspects high schools, government middle schools and primary training institutions, and visits as many institutions of other classes in his division as possible. The deputy inspectors with the help of assistant deputy inspectors arrange for the examination or inspection of all public primary schools, most middle schools and certain other minor industrial and technical schools in their districts. They assist in the inspection of high schools in their districts, as well as in the scholarship, vernacular final and training college examinations. The examination of normal classes in the district is also held by the district inspecting staff. They visit private schools and in deserving cases advise managers to get them registered. They hold conferences of teachers, explain the methods to be followed in the teaching of different subjects, watch model lessons being given by teachers, criticise these lessons, and give model lessons themselves. In the schools inspected or visited by them they direct and guide the work of teachers and leave notes in the log-books for their guidance. They re-visit these schools to see how far the instructions previously given have been followed. One of their most important duties during inspection tours is to increase the number of pupils in the schools by advice to the villagers. Another important part of their work is to pay surprise visits to schools; to ascertain whether the teachers are at their posts and to gain an insight into the normal working of these institutions. They study the educational needs of their charges, visit villages that are likely to support schools, and make enquiries as to whether special facilities should be afforded to backward communities. The inspecting staff of each district is provided with lanterns and lectures illustrated by lantern slides are frequently given. They are expected to keep in touch with the higher revenue and other district officers, to discuss educational questions with them, and to invite their co-operation in any important educational question that may be under consideration at the time. The inspector of European schools, the special inspectors of science teaching and drawing, the inspectresses of girls' schools, the special Muhammadan inspectress of Urdu girls' schools, the special Muhammadan deputy inspectors of Urdu schools and the Bombay deputy inspectors are not administrative officers in the same way that the divisional educational inspectors and the district deputy inspectors are; they are purely inspecting officers, whose duty it is to go round and inspect the schools in their charge and to report on them with such recommendations for their improvement as they think necessary."

The same report contains a description of methods.

"Since the abolition of capitation grants based on examination results by the grant-in-aid code of 1903, the method of inspection rather than of examination, full and detailed in each subject and of each pupil, has been adopted as the means of judging the work and general efficiency of all aided and recognised schools. To government secondary schools also the same principle is applied, and the headmasters are not required to await a regular examination of their schools from the inspecting staff for the purpose of class promotions. They arrange for the examination of their schools themselves and the inspector at his annual or other visits inspects the institutions, tests their progress and general working, satisfies himself that the class promotions have not been injudiciously made, and offers such criticism as he considers necessary."

The movement is in the direction of advice and demonstration of teaching methods. But rigorous investigation is no doubt also required to keep many teachers up to the mark, especially when the school is remote and seldom visited.

97. The quinquennium has seen considerable increases of staff. New *Numbers of inspectorates* have been created—one in Madras presidency with headquarters *the inspecting staff* at Bangalore, one in Burma for the Arakan Division, two in Bihar and Orissa for the Tirhut division and one for the district of Angul and the Orissa States, and two in the North-West Frontier Province. To these must be added the new posts of special inspectors, temporary appointments of personal assistants to divisional inspectors in Bombay and large increases of the subordinate staff, such as the creation of 49 posts of sub-assistant inspector in Madras.

The numbers of officers in the different grades are shown in appendix III for the different provinces. For all India there are 81 inspectors, 86 assistant inspectors, 388 deputy or district inspectors, 1,041 sub-inspectors or officers of similar grade, 240 supervisors, 289 inspecting *pandits*, 16 inspecting *maulvis*, 31 inspectresses, 37 assistant and sub-assistant inspectresses—a total of 2,209 officers. This calculation includes a certain number of posts which are sanctioned but not filled.

Cost.

98. The cost of the inspecting staff in 1916-17 was R49,64,587, being 4.4 per cent. of the total expenditure on education and 6.3 per cent. of the direct expenditure against 7.6 per cent. in 1911-12. The percentage on direct expenditure is 5.85 in Madras, 5.2 in Bombay and Bengal, 5.9 in the United Provinces and the Punjab, 14.4 in Burma, 9 in Bihar and Orissa, 7.9 in the Central Provinces, 10.7 in Assam, 6.4 in the North-West Frontier Province and 2.6 in the minor administrations. This large expenditure is often made a cause of complaint. It is difficult to institute comparisons with other countries. The percentage of the cost of direction and inspection in India is 9.5 of the total expenditure on education from public funds. In England and Wales it would appear from the latest available figures that the cost of administration (including inspection, legal expenses, etc.), is 6.6 of the total public expenditure on education. Special causes which necessitate a strong inspectorate in India are the distances to be travelled, the lack of unofficial supervision and the poor quality of many of the teachers, who require constant vigilance and advice. Moreover, the cost of the establishment is bound to loom large in the general bill for education while the pay of many teachers and consequently the upkeep charges of many schools remain deplorably low.

Inadequacy of inspecting staff.

99. If the number of schools which each officer is required to inspect is taken as the criterion, the inspecting staff must still be pronounced inadequate. A subordinate officer cannot effectively inspect more than 80 primary schools in the year, if he is to see each at least twice. Even this is a heavy burden. Yet in Madras each inspector has to see 46 secondary and training schools (the inspection of which occupies a longer period than does that of a primary school), let alone a number of lower grade schools sufficient to check the work of the subordinate staff; a sub-assistant inspector has on the average 196 schools in his charge and an assistant and a sub-assistant inspectress 153. In Bengal there is an average of 114 public institutions per officer. In Bombay things are better, each officer being in charge of an average of 72 schools and rather over 4,700 pupils. (The standard expected in this presidency is the inspection of 3,000 pupils for a deputy inspector and 5,000 for an assistant deputy inspector.) For the whole of India the number of institutions per inspecting officer is 87. On the one hand this figure includes a certain number of colleges and schools which are not inspected by the usual agency. On the other hand, the total of officers includes officers of all kinds—special inspectors, inspectresses, supervisors and inspecting pandits (who cannot be regarded as full units for inspecting purposes) and others whose duties are of a particular character. The number of boys' middle and primary schools per each officer of the rank of a deputy or sub-inspector is 91.

The reports complain of the numerical paucity of the staff, whose work is made more arduous by the devolution of powers (in itself a necessary reform), the recognition of instruction as an important part of inspecting duties, the growing complexity of the work and the necessity of co-operation with newly created educational bodies.

The problems of inspection.

100. The most urgent problems are the following. First and foremost, the superior staff is mainly engaged with the growing number of higher institutions, training schools, etc., and with office work. Hence it has little time to devote to primary schools. This means that the subordinate staff receive insufficient supervision and the idea spreads that, because the inspector does not so frequently visit primary schools, they are of minor importance. This is specially to be apprehended when the subordinate staff, as often happens, is drawn from the town population and is apt not to appreciate village life and its problems. Second, the subordinate staff itself is frequently so over-burdened with work that inspection must needs be cursory. Third, the pay and status of the subordinate staff are insufficient. This is the case (save in Bombay) with the grade of deputy inspectors, whose duties are important. The secondary education schemes which have been sanctioned for Bengal and Bihar and Orissa contemplate the creation of a district inspector in the provincial service in each district, the posts of assistant inspector being absorbed in this new grade. This reform, at present delayed by the war, will provide each district with an educational officer qualified to advise the magistrate and the district board and adequately remunerated for

his work. Fourth, the office accommodation of the deputy inspector and his subordinates is often insufficient, being frequently merely a room in the board's office; and, in many localities, the provision of houses for the subordinate staff is required. Finally, though the basis of work must long remain territorial, the growth of specialisation and of industrial and commercial developments will render necessary the appointment of a larger number of specialists, the need for whom is already felt.

III.—*Other agencies of control.*

101. The civil authorities are concerned with education, as with all *Civil officers*, branches of administration. In especial, the district magistrate is, as such, required to look into the state of schools and, since he is generally chairman of the district board, is particularly interested in primary institutions. In this latter capacity he has a large voice in the framing of the board's budget, though the portions of it which deal with education are submitted through the inspector to the Director, who can lodge an appeal against them. Civil officers inspect schools on their tours. The reports speak of the cordial relations existing between the civil authorities and the educational officers.

102. The universities form an important agency of control, since they *Universities*, exercise the various powers described in chapter VI, have a free hand regarding standards and examinations and thus regulate the attainment of students in schools and colleges. A university is kept in touch with the department of public instruction by the presence of the Director *ex officio** and of other members of the educational service upon its councils. Its relation with the government is secured in various ways—the head of the administration is ordinarily the Chancellor; where there is Council government, the members of Council (or at least some of them) are included in the senate; and government possesses various powers, such as the sanction of regulations.

103. There are a certain number of standing committees. The oldest is *Standing boards* the educational syndicate in Burma, which was incorporated by legislation *and Committees* in 1860. It conducts certain examinations, mainly the tests in theoretical (a) *advisory*, knowledge for teachers under training. But its chief function is advisory; and government and the department consult it when important educational questions arise. Two-thirds of its members represent non-educational interests and nearly half are non-official.

Another example of advisory committees was the female educational committee in Eastern Bengal and Assam. There is now a single committee of this nature for Bengal.

A recent and important development is the establishment of a board of education in the United Provinces including official and non-official members interested in educational problems. The functions of this board are advisory.

Another type of standing committee, which is found in all the larger provinces, is the text-book committee which advises government as to suitable books for use in schools. A description of the operations of these bodies will be found in chapter XXII.

104. A board of examiners was previously constituted for the conduct of (b) *examining*, some of the departmental examinations in Eastern Bengal. This board has been abolished. A similar board, which at the same time was created for Assam, has been split up into a number of smaller bodies for the management of different kinds of examinations. In Bihar and Orissa a school examination board on similar lines was constituted in 1913 for the control of examinations of training institutions. It is said to have standardised the examinations and to have improved the quality of work done in the lower class institutions. The boards of technical and Sanskrit examinations in Bengal are mentioned in paragraphs 225 and 307. There are also boards for conducting school-leaving examinations.

105. In addition to the local bodies, presently to be described, attempts (c) *administra-* have recently been made to create committees which would exercise some *control* over educational matters within defined areas. It is natural that com-

* In the Benares Hindu University the Director is on the Senate but not *ex officio*.

mittees of this nature should be established in Burma where district boards do not exist. At the end of the quinquennium divisional school boards and a Rangoon school board were created in that province to facilitate the participation of civil officers and non-officials in the conduct of local educational affairs. Some of the duties and responsibilities of the department of public instruction have been assigned to these boards, which exercise their functions through the inspector of schools as their secretary. Their functions are confined to the administration and supervision of vernacular education within their several areas, subject always to the general control of the department, the orders of the government and the provisions of the codes.

Elsewhere functions of this nature are performed by the local bodies. In the United Provinces, however, an attempt has been made to constitute committees for smaller areas than those controlled by district boards. The scheme fits in with the system initiated on the recommendations of the Piggott committee of 1913 (see paragraph 266). Under this system the whole province is divided into circles each of which has central schools together with preparatory schools. It has now been ruled that there should be a local committee for each circle consisting of a few residents of villages, whose duties are to supervise and encourage schools within the circle by endeavouring to increase the enrolment, by insisting on regularity and punctuality of teachers and of pupils, by providing or recommending improvements, by assisting boards in fixing the fee rates, by advice as to hours of attendance and harvest holidays, by arranging for prize distributions, etc. In the Allahabad district it is stated that these committees are playing an important part in the advancement of primary education and arousing interest. Elsewhere they do not seem to have been of much value, and according to latest information they are being abolished.

There are numberless so-called managing committees, some of which are really advisory. But, as these are attached to individual institutions, it will be more convenient to notice them in the chapters dealing with different types of education.

IV.—Local bodies.

Duties of local bodies.

106. Local bodies form one of the most important agencies both of control and of direct management. They include rural boards and municipalities. A rural board (generally called a district board or a district council) exercises jurisdiction in matters of education, sanitation, roads, ferries, pounds, etc., over the area of a district. There are smaller bodies, called local or *taluq* boards, which, under the general control of the district board, exercise delegated functions over sub-divisional areas. In Assam there are no district boards, their place being entirely taken by local boards. In Burma there are no boards either district or local. Municipalities are established in cities and towns and possess a responsibility similar to that of district boards in the matter of education. Taken together these two types of bodies form the agency of local self-government.

107. The educational functions of local bodies are imposed or conceded by law and elaborated in by-laws. The Acts vary considerably in the degree to which they lay responsibility upon these bodies and the scope of the activities thus imposed.

The most categorical is the *Madras Municipal Act*, which lays it upon a municipality to make provision for the instruction in schools of all children of school going age. But even here the responsibility is expressly limited by the phrase 'so far as the funds at their disposal may admit.' In *Bombay city*, too, it is incumbent on the Corporation to make adequate provision for maintaining, aiding and accommodating primary schools. But here again there is a conditioning clause, which makes it clear that inadequacy does not involve universal application, by providing that, in the event of education becoming free or free and compulsory at the instance of government, one-third of the additional cost thereby incurred shall be paid by government. In the district municipalities of *Bombay* and in the *United Provinces* the provision for primary schools is to be reasonable; and the Act appears to interpret the phrase in the case of the latter province by laying on the municipalities the duty of expending on this object at least five per cent. of their normal income after deduction of income from special services. In *Bengal*, the *Punjab*, *Burma* and the *Central Provinces* the Acts are permissive only, allowing municipalities to spend money on schools, or at most declaring their

funds to be applicable to this object—with the addition, in the case of the last three provinces, of training and scholarships. The Acts governing district boards are still less drastic. In *Bombay*, it is the duty of the boards to make adequate provision for primary schools and for training. Boards in *Madras* shall provide for the diffusion of education by the construction and maintenance of schools, inspection and training. But in both these presidencies this duty is to be performed only so far as funds permit. The Bengal Act is peculiar in charging boards with the maintenance and management of all primary schools under public management; as a matter of fact board schools in Bengal are few and of recent growth, the system being almost wholly one of grants-in-aid. In the *United* and the *Central Provinces* the boards shall, so far as the funds at their disposal permit, provide for the establishment and maintenance of schools, inspection, training, and scholarships. It is specified that these things are under the control of boards in the *Punjab*. In *Assam*, a board may contribute towards or be charged with the establishment, maintenance and management of all primary and middle vernacular schools under public management.

It is generally stated that local bodies may perform their duties wholly or partially through grants-in-aid. In all cases the Acts permit government, in case of default, either to execute the neglected duties at the expense of the local body or to supersede it.

It occasionally happens that municipalities find it convenient to transfer the administration of their educational institutions to the district boards, while continuing to pay the expenses. This is the practice among the smaller municipalities of the *United Provinces*, which have no machinery for control, and those of the Jullundur division of the *Punjab*. The arrangement is found to make for efficiency but tends to weaken local interest.

108. The Acts do not, save in the case of *Bombay* city, and the boards of that presidency, of Bengal and of the *United Provinces*, limit the functions of local bodies to primary education. In *Assam* the limitation is to primary and middle vernacular education. But the chief concern of local bodies is with primary schools. In addition to maintaining schools, some local bodies give aid to privately managed schools. In Bengal and Bihar and *Orissa*, this is the usual manner in which they discharge their responsibilities. Elsewhere maintained and aided elementary schools exist side by side. But in *Bombay*, the *United Provinces* and the *Central Provinces* aid to schools in board (as apart from municipal) areas is given almost exclusively by government. In Bihar and *Orissa*, where the distribution of grants was only recently entrusted to municipalities, the change is said to have resulted in greater interest. In *Burma*, though there are no boards, considerable sums are spent in the lower districts from local cesses upon maintained and aided schools.

109. The number of institutions and pupils in schools managed by local *Number and bodies* and the total expenditure on education by these bodies are shown below. *cost of institutions*
Detailed figures for provinces are found in appendices V and VI.

	Boards.	Municipalities.	managed by local bodies.
Number of institutions . . .	38,049	2,952	
Number of pupils . . .	2,234,066	331,474	
Total expenditure . . .	R1,73,78,535	R49,39,083	

In addition to the institutions shown are the mass of schools (especially great in Bengal, Bihar and *Orissa* and *Madras*) which are aided by these bodies.

The general result is that local bodies manage 41,001 institutions containing 2,565,540 pupils, or 35.6 per cent. of the total number of pupils in public institutions and that their educational expenditure, including contributions from provincial funds, is R2,23,17,618, or 19.9 of the total expenditure on education. But a reference to paragraph 115 will show that more than half of this sum is in reality provided from provincial revenues.

110. The powers of the local bodies are defined by rules. The amount of *Educational independence* they can exercise varies largely. In *Bombay* the actual powers of local administration of board schools rests with the department of public instruction, the boards themselves voting money, deciding on their location and, so far as rules permit, fixing the fee-rates. The appointment and control of staff, the determination and payment of salaries and the grant of leave are

the work of the department. Municipalities in that presidency exercise fair wider powers, and the question of delegating further powers to boards is before the local Government. In other provinces the boards exercise a greater measure of independence, appoint their staff, fix rates of pay, etc. Thus, in the Central Provinces, inspecting officers are instructed to confine their activities to inspection and advice and to take up only such administrative work as is expressly delegated. This paragraph and those which follow are to be read in the light of paragraph 118, from which it will be seen that a policy was announced towards the end of the quinquennium which will invest local bodies with a large measure of independence as regards both administrative and financial matters.

Objects on

which expenditure may be incurred. 111. As regards the objects on which local bodies distribute their money on secondary till they have satisfied the claims of primary education.

Though no local body can be said to have fulfilled this condition, yet boards and municipalities lay out respectively 10.58 and 21.68 per cent. of their total educational expenditure upon secondary schools and, quite apart from institutions which they aid, maintain six colleges, 1,430 secondary schools and 393 special schools.

There is a certain temptation, especially among municipalities, to continue this practice. Mr. Richey indeed complains that, while most municipalities of the Punjab pay little heed to education of any kind, the fact that primary education is all that the great majority of children will receive is not realised by the class from which the councillors are drawn. The tendency in recent years has been to relieve local bodies of charges which they had undertaken or which had been imposed on them in respect of secondary education. Before the quinquennium this relief was effected on a large scale in the United Provinces, the Punjab and the North-West Frontier Province. During the quinquennium the government of Burma assumed the management of municipal Anglo-vernacular schools, and municipalities in that province have now no financial obligation towards these institutions. A rule has however been made that provided the needs of vernacular education are fully met richer towns may incur expenditure on Anglo-vernacular education in the form of contributions to the provincial educational budget. It was also decided that middle English schools in Bihar and Orissa should be withdrawn from the control of boards in order to avoid the danger of money intended for primary being diverted to secondary education. Action has been delayed because it is the intention of government to continue its subsidies in full to the boards, which will thus have more to spend on primary education, while additional funds must be found by government for the maintenance of the middle schools. In the Central Provinces the policy has been pursued of entrusting a considerable portion of secondary education to municipalities and the resolution on the report indicates that reliance must be placed upon them for expansion. Elsewhere it will probably not be possible to alter immediately a practice which has gradually grown up and doubtless appeals to some of the bodies concerned.

It is recognised, and has recently been more fully recognised, that the educational duties of local bodies lie primarily towards elementary instruction and that this object constitutes a first charge upon their funds. During the past fifteen years the percentage of expenditure by these bodies on secondary to that on all education has slightly fallen—in the case of boards from 14.08 to 10.58 and in that of municipalities from 33.03 to 21.68. Further efforts are being made to concentrate local and municipal funds on primary education. but without decreasing the total subsidies made by government. But the immediate provision of funds is not in all cases possible.

Local bodies and inspection.

112. Local bodies do not generally maintain their own inspecting staff. A portion of the regular subordinate staff used to be maintained by the boards in some provinces, notably Bengal. The arrangement was found unsatisfactory and was brought to an end, save in some of the low paid grades which are in process of abolition. Municipalities however occasionally maintain their own supervisors, whose work is intended to supplement, not to replace, that of the departmental staff. Such is the case in some of the municipalities

of Bombay, of the United Provinces (where government in 1916 gave grants to four of the municipal towns in order to enable them to make such appointments) and in Nagpur. The Director in the Central Provinces says that the appointment in this last case is a wise step, but that similar appointments under district councils would be a mistake, since his experience of a double system of inspection is not encouraging and funds required for the development of schools cannot be spared for this purpose. In the Punjab some of the municipalities maintain lady superintendents for inspecting purposes.

113. The amount to be spent by local bodies on education in various *Expenditure by provinces* is sometimes fixed by rule; but the tendency of late has been to leave *local bodies* the decision in this matter to the bodies themselves. The rules in force during the quinquennium are briefly given below.

Boards in *Bombay* are required to spend not less than one-third of the revenue derived from the land-cess upon education. In the *United Provinces* it is laid down by law that the provision made by the municipalities for primary schools cannot be regarded as reasonable unless it amounts to at least five per cent. of the normal income after deduction has been made of income from special services. The minimum expenditure prescribed for boards in the *Punjab* is a sum made up of all grants made for purposes of education, the fee income and 25 per cent. of the general income of the district fund excluding the items before mentioned. It is further laid down that out of this sum the portion set apart for primary education should be not less than grants for and fees from that class of instruction and three-fifths of the portion of the annual income set aside for education generally. In the case of municipalities in that province the rule regarding general expenditure on education is similar save that 10 per cent. of the income is prescribed in place of 25 per cent. In *Burma*, where there are no boards, the maximum expenditure made by municipalities should not exceed 5 per cent. of the gross annual income; nothing is laid down regarding the minimum. In *Bihar and Orissa* the minimum expenditure for a board is the amount actually expended in 1911-12 *plus* an amount approximately equal to 10 per cent. of the grant from the Public Works cess, *plus* the total of the recurring grants given by Government since April 1st, 1912. In the *Central Provinces* board expenditure may not exceed a sum equivalent to the education cess, the fee receipts, government grants, private subscriptions and such portion of the board's income as with the approval of the commissioner has been allotted to education. The rule regarding municipalities is the same save that there is no education cess. An important piece of legislation has been carried out in *Berar*, whereby district councils may at their option double the education cess and impose a further cess on non-agriculturists. It is proposed similarly to legislate for the other divisions of the Central Provinces. In *Assam* the percentage spent is not ordinarily to fall short of that represented by the expenditure of the previous year and of the year 1904-05, exclusive of grants; *i.e.*, the expenditure of 1904-05 is taken as the basis and to this are added the enhancement up to the previous year and any new grants made during the year. In the *North-West Frontier Province* a board is required to spend 25 per cent. of its total income exclusive of school fees and grants which are to be expended on education in full.

No specific rules are laid down for boards or municipalities in *Madras* and *Bengal*, for boards in the *United Provinces* or for municipalities in *Bombay*, *Bihar and Orissa*, *Assam* and the *North-West Frontier Province*. In the *Madras* municipalities, however, it is laid down that 15 per cent. of the income may be regarded as a fair proportion. In *Bengal* the rule requiring a municipality to spend 3.2 per cent. of its ordinary income has been abrogated, but it is understood that this is still taken as a fairly suitable standard. Nor is there any strict rule regarding board expenditure in this presidency. Ordinarily however the income from pounds and ferries and some portion of the Public Works cess are assigned to education.

114. The percentage of educational expenditure on the total expenditure of boards throughout India is, in *Madras* 14.8, *Bombay* 43.1, *Bengal* 23.1, *United Provinces* 28.3, *Punjab* 27.6, *Bihar and Orissa* 19.1, *Central Provinces* and *Berar* 30.0, *Assam* 33.3, *North-West Frontier Province* 42.9, *Coorg* 26.7, *Delhi* 37.1, *Ajmer-Merwara* 9.1, and for all India 24.9.

Similarly the proportion so spent in municipalities is, in Madras 9.6, Bombay 15.9, Bengal 3.8, United Provinces 6.7, Punjab 11.0, Burma 4.4, Bihar and Orissa 4.6, Central Provinces and Berar 14.0, Assam 8.0, North-West Frontier Province 11.4, Coorg 14.3, Delhi 3.9, Bangalore 2.2, Ajmer-Merwara 4.7, Madras Corporation 4.4, Bombay Corporation 4.0, Calcutta Corporation 0.6, Rangoon Corporation 5.4, and for all India 6.8.

The large differences in the proportions are probably explicable by varieties in the methods of calculating income, etc.*

Assistance rendered from provincial resources to local bodies.

115. In connection with these questions of expenditure two important points should be noted which have enhanced the resources of local bodies.

Previous to 1913 the boards of several provinces did not receive the whole of the land cess. In Bengal for instance the cess was divided into the road cess and the public works cess and the latter was taken by the local Government, which however returned a portion in the shape of grants. In the United Provinces, the Punjab and the North-West Frontier Province considerable reductions were made from the cesses for various purposes. In 1913 the entire net proceeds of the cesses were handed over to the boards, the Government of India making assignments to the local Governments to cover the loss. By this means the income of boards in the provinces named above was enhanced by 82½ lakhs.

Secondly, Government supplemented the incomes of boards in 1905 by contributions for general purposes amounting to 25 per cent. of their then existing income and both in that year and subsequently imperial grants assisted local Governments in making special contributions to boards and municipalities for purposes of education and sanitation. Of the grants made during the viceroyalties of Lord Curzon and Lord Hardinge, a substantial portion was handed over to local bodies for the development of primary schools. The amount shown in general table IV, as expended from local funds upon education amounts to R1,73,78,535 and that from municipal funds to R49,39,083. But out of the former sum R99,96,410 and out of the latter R15,83,798 are contributed from provincial revenues, so that out of the grand total of R2,23,17,618 expended by local bodies no less than R1,15,80,208 or more than half represents money handed over to them by the local Governments. The total expenditure in each province shown separately for boards and municipalities together with the government contributions included in these sums are shown in appendix VI. The variations are striking, especially the comparative paucity of contributions made in Bengal, and are probably to be explained by differences in the conditions of boards and their ability to discharge their functions.

116. An interesting example of the method on which contributions have been allotted to boards is contained in the Punjab report. When the large imperial grants were received, it was laid down that the local Government would bear two thirds of the salaries of trained board school teachers and of grants earned by aided elementary schools and one-half of the salaries of untrained teachers, a proviso being made that no trained teacher should receive less than R12 a month or R15, if a headmaster. As the system favoured the richer districts, special doles were made to the poorer boards. When the imperial grants were thus allocated and no new grants were forthcoming, it was found that government had committed itself to the expenditure of over half a lakh which was not covered by the funds available for this object and had to be reappropriated from other heads. Hence in 1915 the system had to be changed. Boards are now required to submit proposals annually and distribution is made according to their needs by the Finance Committee, the grant for each new school required being R200--a liberal estimate of two-thirds of the annual cost in the Punjab.

117. It might be anticipated that the expenditure of local bodies on education would largely have increased during the twelve years, that is, from the time before the policy of imperial grants whether general or for educational purposes was instituted. The expenditure in 1904-05 was just over 95½ lakhs.

* These figures are taken from the district board and municipal reports for the year 1915-16. Later figures are not available.

In 1911-12, it was Rs 1,35,64,264. In 1916-17, it was Rs 2,23,17,618. Thus the increase during the quinquennium has been a little over 87½ lakhs and during the past 12 years 128 lakhs. When it is considered that government now contributes over 115 lakhs towards the educational expenditure of boards and that a considerable amount of this was made available during these twelve years it is clear that the additional amount which local bodies have found from their own resources for purposes of education is comparatively small.

118. During the quinquennium the Government of India issued a resolution on Local Self-Government and also passed orders on the questions raised by the Royal Commission on Decentralisation. These orders, issued on the 19th September 1916, were as follows. Generally speaking the Government of India endorsed the decision of the Commission to give to local bodies a greater share in the control of such education as is entrusted to them. It accepted the principle that the activities of these bodies should in the main be confined to primary schools, though the charge of vernacular middle schools might also be undertaken in cases where their duties towards primary education were fully discharged, and that secondary institutions teaching English should be financed by government. As, however, government is at present unable to meet the additional expenditure which the adoption of this recommendation would involve and the reduction in grants for other objects might lead to misconceptions, the financial support of secondary English schools now maintained at the cost of local bodies must continue so to be maintained, though expenditure on this object should not be increased at the expense of the interests of primary education. As regards the powers of local bodies, such matters as leave, acting and travelling allowances, pensions or provident funds and maximum salaries for establishments should be governed by rules prescribed by the local Government. But the local bodies should have a free hand in the creation and filling up of appointments, punishment, dismissal, etc. They should also be able to open and close schools, although the collector should have power to order the opening of new primary schools where necessary and a local body might be required to submit proposals for the closing of a school to the collector or the director. The practice under which a certain choice is allowed in the curriculum should be emphasised. The departments of public instruction will continue to prescribe courses, the adoption of which, with or without any alteration, should be left to the local bodies. Text-books not approved by the department should not be prescribed without the sanction of the collector. But a free choice should be given from lists of approved works provided changes are not unnecessarily frequent. As regards inspection, the ordinary practice should continue as heretofore, namely, the retention of the inspecting staff in the pay and under the control of government, though a local staff might be maintained at the expense of local funds provided it merely took the place of the existing staff and was subordinated to the government inspecting agency. Finally local bodies should be given full power to pass their budgets, though the rule should generally be adopted that grants made for education are spent on that object and that the standard of expenditure on primary education previous to the receipt of such grants is not substantially reduced.

119. It is usual to add a few remarks regarding educational work under the Corporations in the presidency cities. The position is as follows:—

*Education in
presidency
cities.*

	Total expenditure on all objects. (a)	Total expenditure on education. (b)	Percentage of (b) on (a). (c)
	Lakhs	Lakhs	
Madras	45.4	0.99	2.2
Bombay	153.9	6.3	4.1
Calcutta	109.0	0.66	0.6

The Madras and Bombay Corporations maintain 21 and 195 primary schools with 2,742 and 23,987 pupils respectively. It may be assumed that other schools in Madras receive aid. In Calcutta there are 337 boys' primary schools, mainly of the proprietary type, with 17,229 pupils.

120. The contrast between Bombay and Calcutta is striking, especially in view of the statement made by Mr. Hornell, that of the expenditure in the latter city only Rs 22,782 (exclusive of remissions of rates and taxes) goes on primary education,* whereas Bombay spends over 5 lakhs on this object. The question of education in Calcutta came to be regarded as so important during the quinquennium that an officer was deputed to investigate it. He reported that the condition of schools was far from satisfactory. "An ill-lighted and ill-ventilated room in a private *pucka* house, or an equally objectionable hut with a tiled roof; a number of boys huddled together, sitting, in some cases, on benches and, in some, on the floor, but all alike shouting at the top of their voices; a *guru*, uneducated and untrained, but determined to eke out a living for himself, dozing at the desk—this is the picture of an ordinary primary school." This report was laid before the Corporation. The chairman pointed out that the Bombay municipality receives an annual grant from government for liquor licenses and tobacco duty aggregating 4½ lakhs a year. It was also pointed out that the Corporation were not in a position to undertake the primary responsibility for the provision and maintenance of schools and that it was not the intention of the law that they should do so. It was, however, admitted that schools were unsatisfactory and the Corporation declared that they would be glad to co-operate with government in improving it, the suggestion being made that loans should be raised for the construction of suitable school buildings and the amounts now spent on grants might be devoted to interest and sinking fund, the Corporation undertaking a larger expenditure for some such specific purposes and government defraying the cost of the staff and maintenance of the schools so constructed. The Presidency division inspector has since been instructed to prepare a scheme setting forth the needs of each ward in respect of school buildings.

121. The position in Bombay is as follows. The produce of liquor licenses and tobacco duty had been made over to the Corporation to help defray the police charges. When government in 1907 undertook these charges, which amounted to just over 5 lakhs, it did not resume these concessions. But in exchange the Corporation undertook certain medical, educational and other expenses which had previously devolved on government and which also amounted to just over 5 lakhs (inclusive of the total government expenditure on primary education in the city, which, apart from building grants, then amounted to Rs 86,000 a year). The Corporation further undertook to make such adequate provision for primary education as might devolve upon them owing to the withdrawal of the Government expenditure, safeguards being, however, added in case of a change of policy. Accordingly the City of Bombay Municipal Act renders it incumbent on the Corporation to make adequate provision for primary education. A further section of the Act lays down that if at any time government makes primary education free or free and compulsory in the city, it shall then pay to the Corporation a grant amounting to one third of the difference between the cost thereafter annually incurred by the Corporation on primary education and the cost so incurred in the period of twelve months immediately preceding the change. It is also provided that should there be any change in the general policy of the government as regards its own liability towards the cost of primary education, the Corporation would be entitled to benefit thereby to the same extent as other municipalities. In pursuance of the obligation laid upon it by the Act, the Bombay Corporation has increased expenditure upon education from 1.7 lakh in 1907 to 5.7 lakhs in 1916-17. It may be mentioned that in 1916-17, the Corporation received from the liquor licenses about 1.44 lakh and from the tobacco octroi 3.52 lakhs.

122. In Calcutta too the contribution made by the Corporation towards the upkeep of the police was remitted in 1888, when the suburban municipalities were amalgamated with it, and the rate levied for that purpose was abolished. But a new conservancy tax with the same maximum was imposed in order that "the Corporation might not be worse off *qua* taxation than before." The promotion of primary and technical education lies at the discretion of the Corporation.

* The Report on the Municipal Administration of Calcutta, 1916-17, states that Rs 1,225 was spent on primary education in that year (page 31).

V.—*Private managing agencies.*

123. Privately managed institutions number 111,523 and their pupils *Privately* 4,402,883 or 61.1 per cent. of the total number of pupils in public institutions. *managed* Expenditure on these institutions is R5,07,80,150 made up of R1,58,07,359 *institutions.* from public funds, R1,98,70,419 from fees and R1,51,02,372 from other sources. Thus, the majority of institutions fall under private management.

124. The policy of entrusting much of the educational activity of the *country to societies and individuals* dates from the despatch of 1854 and has *private management* since been steadily pursued by government. The main reason for initiating *management and the policy* was the consideration that government with its limited resources *grant-in-aid.* could not cope with the almost boundless exigencies of the situation. The Commission of 1882 declared the improvement and extension of private institutions to be the principal care of the department. But it found among its witnesses differences amounting to a complete conflict of opinion on this point, it admitted the unsuitability of the grant-in-aid system in its existing form to the supply of education for the masses, it dwelt on the lack of agencies and co-operation, it was unable to advise the immediate or general withdrawal of the State from the provision of high education and it agreed "that the careful supervision of the State is indispensable for higher education; and that whatever withdrawal there may be, whether soon or late, from its direct provision, there should be none whatever from its indirect but efficient control."* The Resolution of 1913 restated adherence to the policy. "It is dictated," the Resolution ran, "not by any belief in the inherent superiority of private over State management, but by preference for an established system and, above all, by the necessity of concentrating the direct energies of the State and the bulk of its available resources upon the improvement and expansion of elementary education. The policy may be summarised as the encouragement of privately managed schools under suitable bodies maintained in efficiency by government inspection, recognition and control, and by the aid of government funds."

The amount of recurring grant-in-aid given towards the maintenance of privately managed institutions has increased in the past twenty years from R41,34,001 to R1,58,07,359. During the quinquennium the increase was R60,13,088. The total sum now given is made up of R1,07,75,504 given directly from provincial funds and R50,31,855 from local and municipal funds. In addition to this, large amounts are disbursed from public funds to meet the cost of buildings and other indirect expenditure connected with privately managed institutions. The number of institutions now in receipt of aid is 92,582, while that of unaided institutions is only 18,941.

125. The aided primary school has not, on the whole, been particularly *Value of pri-* successful. Board schools are more efficient and popular. The system of *vately managed* private management has led to a large expansion of secondary and collegiate *institutions.* education, and here and there has called forth local generosity. On the other hand, several of the reports point out that such schools are not always wisely located; they can be started "where and when and under whatever auspices chance may provide," sometimes in competition with each other or with government institutions; many depend solely or almost solely upon fees; and this fact, combined with the light control which external authorities bring to bear, is not always productive of happy results.

126. On the other hand there are many excellent private institutions. *Missions.* Conspicuous among these are those managed by missions. In the larger provinces they number 10,461, namely, 42 colleges, 843 secondary schools, 9,259 primary schools, 75 training institutions and 242 other schools. Their total cost is R1,38,00,457. Out of this sum, R38,27,311 come from mission funds, to which must be added the honorary services of many teachers. Appendix VII gives further details. Church of England missions educate some 113,000 pupils and contribute about 7.84 lakhs; Roman Catholic missions approximately 108,000 pupils and 8.8 lakhs; Baptist missions 54,000 pupils and 3 lakhs. Scotch, American and other missions work on a large scale.

* Report of the Indian Education Commission of 1882, pages 352, 356, 357, 436, 454, 462, 463, 464.

The Methodist Episcopalian and Welsh Calvinistic missions may be specially mentioned.

The education of girls, of aboriginal tribes and of depressed classes is the field in which missions have achieved the most conspicuous success. But they also maintain excellent colleges and secondary schools and manage popular hostels.

Societies, individuals, etc.

127. Some of the schools managed by Indian societies or endowed by liberal-minded land-holders and others also reach a high level of efficiency. Among the former class, there are a considerable number in the Bombay presidency—the institutions of the Deccan Educational Society, the Shikshan Prasarak Mandali, the Ahmednagar Education Society, the Seva Sadan and others. In this presidency some of the proprietary schools, too, are reported as doing really good work. Many of the proprietary schools throughout India, however, are in need of reform, as also are those managed by *fainéant* committees. Mr. Hornell, speaking of the managing committees of aided middle schools, says that they cannot as a rule be regarded seriously, as all authority is centred in the secretary or the president. This remark is of wide application. Further comment on the results of the policy of dependence on private effort is reserved for the chapter on secondary education.

CHAPTER V.

THE EDUCATIONAL STAFF.

The Educational services. 128. The inspectorate and the staff of government institutions are composed of government servants, who are arranged in services in the way described below.

(i) The Indian Educational service, which consists mainly of Europeans, is recruited by the Secretary of State. Its members fill the posts of Directors, inspectors, principals, professors, headmasters, etc. The pay is R500 rising by annual increments of R50 to R1,000. As to further promotion, there are the posts of Director which carry special pay, sixteen* personal allowances rising to R250 or R500, and, in cases where a man fails to obtain these advantages, allowances of R100 a month after 15 years' service. The period of service ordinarily required is 30 years and the pension amounts to £437-10-0, a Director of approved service receiving £525. Ladies receive special rates of pay ranging generally from R300 to R500 or R600 a month. The post of Director is not confined to the Indian Educational Service and, if no suitable officer is to be found in that service, may be otherwise filled. Appointments are occasionally made to other posts also, from services other than the educational.

(ii) The provincial services, which are composed mainly of Indians, are recruited by the local Governments. They include inspectors, assistant and joint inspectors, principals, professors, headmasters of important high schools and of some normal schools, etc. The arrangement of the services varies from province to province. In Bengal, Bihar and Orissa and Assam there is a regular graded service from R200 to R700 a month. Elsewhere the services are sometimes split up according to the kinds of duties performed. The average pay is R320, the highest rate being R418-9 in Burma and the lowest R230-9 in the North-West Frontier Province.†

(iii) The subordinate service, which is composed almost wholly of Indians and is recruited by local Governments, comprises such posts as those of deputy and sub-inspectors, lecturers in colleges, headmasters, assistant teachers, etc. Here also Bengal, Bihar and Orissa and Assam have a regular graded service from R50 to R250 a month. In other provinces various arrangements are adopted, the service being sometimes split up according to the nature of the

* The highest rate of pay varies with the size of Chiefly Colleges.

† The rates for the provinces are—Madras R250, Bombay R300, Bengal R312-1, United Provinces R317-3, Punjab R253-1, Burma R150, Bihar and Orissa R312-5, Central Provinces R275-3, and N.W.F.P. R249-9.

duties performed. The average pay is R65.1 varying from R53.7, in the North-West Frontier Province to R88, in Bengal.*

(iv) In some provinces are found lower subordinate services. Sanction has recently been obtained to the breaking up in some cases of these services into separate cadres according to the work performed, such as a vernacular teachers' service and so forth.

(v) Outside posts are generally created for officers performing special duties.

The numbers in these services, the average emoluments and the proportion of Europeans and Indians who occupy posts are shown in the following statement. The figures for different provinces are given in appendix VIII.

Service	NUMBER OF OFFICERS.			Average monthly pay in rupees to one place of decimals.
	European or domiciled community.	Indian.	TOTAL.	
Indian Educational service †	241	7	248	832.2
Provincial Educational service	57	450	507	319.9
Subordinate Educational service	137	8,841	8,978	65.1
Unclassified posts	228	3,707	3,935	45.9
TOTAL	663	13,005	13,668	78.6

129. It has already been stated that improvements in the pay of those *Improvements* engaged in educational work formed a feature of the quinquennium. These *in the pay of* improvements, however, touched mainly the board teachers of primary schools *the services*, and the staff of aided secondary and primary schools, and affected only to a less degree the services here described. A few minor changes were made. Headmasters of high schools recruited in England now enjoy the full pay of the Indian educational service; in the Central Provinces the collegiate branch of the provincial service was reorganised in grades from R150 to R500; and in Bengal the headmasters and headmistresses of government high and middle English and vernacular schools were granted local allowances of R50, R30 and R20 a month, and assistant headmasters or mistresses of high schools R20 a month, provided that, in the case of high school staff, the officers are members of the subordinate educational service. Other schemes of reform are a-foot, such as the transfer to the provincial service of the chief deputy inspector in each district (henceforward to be known as the district inspector) and headmasters of high schools in the case of Bengal and Bihar and Orissa. But organised improvement in the prospects of the Indian and provincial services was shelved pending the deliberations of the Royal Commission on the Public Services in India, which commenced its sittings in November 1912 and whose report appeared in 1916.

In view of this delay it was decided to give some temporary relief in the case of the educational services, where the necessity of improvement had so long been recognised. Accordingly at the beginning of 1913, eight special allowances of R150 each were bestowed on officers of the provincial services whose recognised claim for promotion to the Indian Educational service could not be conceded till a decision was reached. The cases of others, whose pay appeared incommensurate with their merits but whose age precluded their chances of benefiting by any scheme of reorganisation, were treated under general financial powers conferred on local Governments at the beginning of the quinquennium. At the end of 1914, a provision with similar ends in view

* The figures for the provinces are—Madras R72.4, Bombay R78, Bengal R88, United Provinces R55.7, Punjab R61.2, Bihar and Orissa R86.9, Central Provinces R84, Assam R70.2, North-West Frontier Province 53.7. The figure for Burma has not been returned.

† The following are not included in the Indian Educational Service figures:—Five officers of Bombay, *viz.*, the Director of Public Instruction and 4 officers on deputation; 12 vacancies, 6 in Bengal, 1 in the Punjab, 5 in Bihar and Orissa, and 2 Indians who are officiating in the Punjab in place of Europeans on deputation. It includes one officer on deputation in the Punjab from the Medical Department.

was made for the Indian Educational service, by which allowances aggregating R23,800 a year were distributed to certain of its members provided they fulfilled specified conditions of service.

A fairly sustained effort has also been made to improve the pay of the staff in the lower services. Thus, Mr. Mayhew reports that the average pay of teachers in government secondary schools has been raised from R65 to R85; undergraduates rise in grades from R40 to R125 and graduate teachers on a time scale from R60 to R125, while there are 40 additional posts of R150 to R250 reserved for officers of special merit.

The staff in schools managed by local bodies and private agencies.

130. Of the total of 280,738 teachers in colleges and schools, only 9,474 are in government service. Of the remaining 271,264, there are 78,977 in board employ, 13,058 in municipal and 179,229 in private employ.

Contributions to local funds and enhanced aid have served to improve the pay given to these teachers. In the resolution of 1913 the Government of India laid down R12 as the minimum pay of trained primary teachers. In many cases this minimum is exceeded. But the existence of a large body of untrained men reduces the average of board teachers' pay to less than this amount. One of the inspectors in Bihar and Orissa reports that in aided high schools (exclusive of mission schools) the rates of pay now range generally from R20 to R100 instead of, as formerly, from R12 to R60, and in privately managed middle schools from R15 to R50, instead of R6 to R30.

The pay received by board, municipal and private teachers in various grades of institutions throughout India is as follows.

Kind of employment.	Number of teachers.	AVERAGE MONTHLY PAY.			
		In Colleges.	In Secondary schools.	In Primary schools.	In other schools.
Board	71,140	R 42.9	R 15.2	R 11.0	R 21.5
Municipal	11,584	143.3	37.4	15.4	32.7
Private	177,151	176.2	34.7	7.8	15.3
TOTAL . .	259,875	174.1	32.6	9.2	15.9

The low pay shown for teachers in board secondary schools is due to the fact that these are largely middle vernacular schools. The total number of teachers here shown falls slightly short of the actual total. Figures for Coorg, Ajmer-Merwara and Bangalore are not included.

Pensions and provident funds.

131. Apart, however, from the actual pay received, it is important to consider the arrangements made by the controlling authorities for the prospects of their employees.

Government servants are classed in the services already specified, receive regular grade or time-scale promotion and are eligible for pension.

Board and municipal servants, too, are often in regular services and sometimes held eligible for pensions or the benefit of provident funds. In Bombay and the Central Provinces, their service is pensionable.

In the United Provinces and the North-West Frontier Province contribution to provident funds in the case of teachers on R10 or over is generally compulsory. In Bihar and Orissa and under most of the local bodies in Assam and also in Delhi teachers are permitted to contribute. This question is further dealt with in paragraphs 219 and 273-274.

The employees of private agencies are not necessarily eligible for any provision for old age. As a matter of fact, however, a considerable number of privately managed institutions have now started their own provident funds. The funds are established for the most part in secondary schools and a description of them will be found in paragraph 219.

The establishment of a general provident fund for teachers in non-pensionable employ has long been under consideration by the Government of India and the local Governments and a small committee met at Delhi in 1914 in order to consider the question. Some of the reports bear witness to the fact that a general fund of this nature is an urgent necessity.

132. The inadequacy of the pay of the educational services has long been *The inadequacy of the* recognised. "So far as the staff of government colleges is concerned," says *quacy of the* the Bengal Director, "those graduates of Calcutta University who, on the *conditions of* strength of their M. A. and M. Sc. degrees and possibly some small amount of *educational* experience are appointed early in life to a professorship in the provincial *services*. educational service have no great cause for complaint, but this service also contains certain professors who hold European academic qualifications secured in some cases at the cost of considerable struggle and hardship which have profited them little, if at all, in the matter of pay and prospects. These officers have a grievance. Then there are the men whose qualifications, had they been fortunate, might have procured them, to start with, appointments as professors in the provincial educational service. These men begin as lecturers on Rs 125 in class IV of the subordinate educational service—in the past many began on Rs 100 in class V of that service. They are doing practically the same work as professors, but, failing professorships in appropriate subjects becoming vacant, the only prospect that they have is to climb slowly and laboriously up the subordinate educational service. In this service the lecturer has to compete with inspecting officers, school teachers and others, so that, even if he does work of real distinction in his subject, it is difficult, if not impossible, to give him exceptional promotion." The same report and that from Bihar and Orissa lay stress upon the still greater disabilities of inspecting officers and school teachers, especially those who are included in the lower subordinate service, where the initial pay is Rs 15. The defects in all these three services are the grading, which consigns a disproportionately large number of posts to the lower classes, and the lack of correspondence between the rank held by an officer and the pay he receives. One hears of promising officers, promoted to posts of responsibility, finding themselves on lower pay than their own subordinates. The system of allowances for certain officers in Bengal is designed partially to remedy this defect.

But the out-look for those in private employ is still worse. A privately managed school may have to offer larger initial pay than a government or a board school. But there is not the same fixity of tenure or certainty of some promotion, however, slow. There is no pension attached and the system of provident funds, though growing, has as yet been introduced only very partially. It is not surprising that many teachers put much of their energy into study for the legal profession and take an early opportunity of abandoning a career which offers little inducement in the way of prospects.

Notwithstanding considerable improvements in pay, the primary teacher may still find himself on a pittance which would hardly satisfy a labourer.

Large expenditure will be necessary before the conditions of the teaching profession are rendered such as will attract the right type of man. If there has been some improvement in pay, there has also, as the Madras report says, been a rise in prices. Nor will enhanced pay alone serve to establish a satisfactory and contented body of teachers in privately managed schools. Greater security of tenure, clear agreements as to terms, notice of termination of service, etc., and some general provision for old age are equally necessary reforms.

133. The Royal Commission on the Public Services in India held its sittings during the quinquennium. Its proposals touching the educational *conditions of the* services were aimed mainly at removing the bar which has hitherto prevented *Public Ser-* the entry of Indians in any but very small numbers into the Indian Educational *vices Com-* Service. This involves the abandonment of the present distinction between *mission*. the Indian and the provincial services and the creation of a single service. The Commission proposed that this new service should be divided into two classes according to the nature of the work to be performed. Class I would include those who perform the superior work of supervision and control and

would comprise approximately 264 posts—*i.e.*, the posts included in the Indian Educational Service (about 199 at that time) with an addition equivalent to one-third. Recruitment for three-quarters of these posts should be in Europe and for the remaining quarter in India. In the case of newly appointed posts, the recruitment would be equally divided between Europe and India. Class II would contain those officers who are engaged on ordinary teaching or inspection. It would be generally commensurate with the present provincial service but should be increased up to the requirements of the work to be done. Recruitment would be wholly in India. The appointment of twenty professorships for the higher branches of study was recommended.

It was also the aim of the Commission to improve the prospects of the service. They proposed that the pay of an officer of class I, if he were recruited in England, should commence on R550 and rise to R1,250, if he were recruited in India, on R350 rising to R1,250. Two selection grades, together equal to 20 per cent. of the total of posts, were proposed, bringing the pay of selected officers (wherever recruited) up to R1,500 and R1,750. In class II an officer would begin on R250 and rise by a time-scale to R500, with the hope of entering a selection grade up to R700. The result would be an average pay in class I amounting to R1,043 for officers recruited in England, being an increase of 7.5 per cent. on the then average of R970¹, and an average pay amounting to R948 for officers recruited in India; in class II the average would be R439, being an increase of 25.1 per cent. on the then average of R351.*

The Commission made many other proposals regarding the grouping of officers into an administrative, a college and a special branch, methods of recruitment, length of service, pensions, the terms of lady officers, etc.

No orders have yet been passed on these recommendations. But the Government of India addressed local Governments after the close of the quinquennium, inviting their views on certain points and indicating a readiness to consider a larger measure of Indian recruitment.

The recommendations of the Commission relate only to the highest services—the Indian and the provincial. There remain the subordinate, the lower subordinate and the other services and unclassified posts, which contain the great majority of officers. There are also the teachers under local bodies and the enormous host of teachers in private employ. No more important problem confronts the educational administration than the provision of adequate conditions and prospects for the inspecting staff and the 280,000 teachers, of whom the highest services (numbering less than 1,000) account only for a minute fraction. On the solution of this problem depends the solution of many of the most pressing difficulties. Something has been done, but much more remains to be done.

* In Burma the proposed average was 500¹, being an increase of 11 per cent. on the then average of R150¹. The pay, as calculated by the Commission, was generally higher than as shown in the present report.

CHAPTER VI.

UNIVERSITIES.

I.—Organisation.

134. Until the close of the quinquennium there were five universities in *Kinds of universities.* India—those of Calcutta, Bombay, Madras, the Punjab and Allahabad. These were founded between the years 1857 and 1887 and are mainly of the affiliating type. During the quinquennium plans were laid for the creation of new universities, some of which, at the time of writing, have already come into being. The present chapter therefore falls into two parts—a description of the progress made in the universities actually in existence during the period and an account of the formation of new institutions.

135. The older universities possess similar constitutions save for slight *Constitution.* variations in the size and composition of the senates. The main features are a Chancellor, who is the head of the local administration; a Vice-Chancellor nominated by government; a senate consisting partly of *ex officio* fellows, partly of ordinary fellows to the number of 100 in the three senior, 75 in the two junior universities, nominated by the Chancellor save that at the senior universities 20 are elected, half by the faculties, half by the registered graduates, at Lahore 15 by the registered graduates, at Allahabad 15 by the senate or the registered graduates or both; faculties and boards of studies; and finally a syndicate of not more than 17 members (at Allahabad 18), of whom ordinarily two are *ex officio* and the remainder elected by the senate, the faculties or both. The Viceroy is the Chancellor of the University of Calcutta, and the Government of India stands towards that university in the position which, in the case of each of the other universities, is occupied by the local Government at whose headquarters it is situated. The senate is the governing body, legislates (subject to government approval) for the university and considers all questions of importance. It also possesses the ultimate power in the conferment of degrees and forms the faculties from among its own members. The syndicate is of the nature of an executive committee, preparing questions for discussion in the senate and also possessing separate powers of its own, though its actions in exercise of these powers are subject to control and revision by the senate. Again certain powers are retained by government—the act of affiliation and disaffiliation of colleges, the sanction of new or modified regulations, etc.

136. The characteristics of this arrangement are as follows:—The main powers (subject in some important respects to government but independently wielded as regards academic matters) are concentrated in the hands of a senate, which is largely a lay body, since the law does not require that more than two-fifths of its ordinary members be engaged in the profession of teaching. There is no independent academic body; for the authorities to which certain of the administrative and academic functions are delegated are created by the senate, mainly composed of members of the senate and liable to see their decisions revised by the senate. The faculties for instance are composed of members of the senate, each of whom is assigned to one or more of these bodies, though specialists not connected with the university may be co-opted. Often they are large bodies; at Calcutta, the faculty of arts consists of 66 members, that of science of 27, that of law of 23, that of medicine of 16 and that of engineering of 9. Half the members of the syndicate, again, may be laymen. At the same time the Chancellor and government exercise powers through nomination and the retention of certain sanctions. One of the characteristics of the new university at Benares is the distinction between administrative and academic functions, for the latter of which a separate body has been created with independent powers and capable of framing its own regulations. It was the intention to make a rather similar arrangement at

Patna, though one and the same body would deal with administrative affairs subject to the senate and with academic affairs independently. But, owing to the demand for popular control over the various activities of the university, academic and administrative functions will there be exercised by a syndicate containing a strong lay minority and will be liable to revision on appeal to the senate as described in paragraph 161.

Changes in constitution.

137. The most important changes in constitution which have taken place during the quinquennium, apart from the ideas embodied in the Acts incorporating the new universities, have been the substitution of Members of the Executive Council of Bengal for members of the Government of India (the Education Member in the latter government being retained) as *ex officio* fellows of the Calcutta senate and an alteration in the composition of the Madras syndicate whereby the elected members, previously numbering ten and chosen by the senate, have been raised to twelve of whom five are elected by the faculties and seven by the senate. Certain alterations in the method of forming the syndicate at Bombay have been proposed by that university and await consideration by the local Government. The Government of India have had the whole question of the composition and functions of the senates under consideration.

Functions.

138. The universities recognise schools for purposes of presenting pupils at the matriculation, save in Madras, where this power is exercised in British territory by the Director and in Native States by the Durbars. Schools within the territorial jurisdiction of the University of Allahabad apply in the first instance through the department, which also makes the initial, though not necessarily subsequent, enquiries. Elsewhere school managers apply direct to the university, which, though it ordinarily accepts the report of the government inspector, may utilise some investigating agency of its own. The Bombay report states that the university sometimes grants recognition to schools which the department had declined to recognise.

As regards the conditions laid down for recognition, a resolution of the syndicate of the University of Calcutta in 1908 detailed those which are prescribed by that university. Among other things it is laid down that the staff should contain not less than two graduates and two teachers who have passed the intermediate. The minimum scale of salaries for *mofussil* schools was fixed at Rs 50 a month for the headmaster, Rs 40 for the second master and Rs 25 for each of the other four masters. A slightly higher rate was prescribed for headmasters and second masters in schools in Calcutta. The accommodation required is 8 square feet for each pupil, provision on this scale being made for 80 per cent. of the boys on the roll, which is taken to represent the average attendance. It is laid down that in the case of new buildings 10 square feet should be insisted upon.

The universities also conduct their own matriculation examinations, though they also accept the school leaving certificate (save in Bombay) and other equivalent examinations as a passport to their courses.

The affiliation and disaffiliation of colleges is ultimately the act of government. Government, however, is mainly guided by the opinion of the syndicate and the senate through whom such application must first come, although, whatever the views expressed by those bodies, the application must go forward and the ultimate authority is not bound by those views. Cases of disaffiliation are very rare.

In the University of Calcutta it has been laid down that affiliation up to the B. A. pass standard in any subject is conditional on the presence in the college of two qualified lecturers in that subject. For affiliation to the honours standard the appointment of a third eminently qualified lecturer is as a rule demanded. For physics and chemistry three lecturers are demanded in each subject, one of whom in each set should possess eminent qualifications. Such a staff would justify the inclusion of the honours courses. Conditions are also laid down regarding the equipment of laboratories. No definite rule, however, appears to have been laid down regulating the proportion of students to professor.

Universities are required to inspect their affiliated colleges—Calcutta and the Punjab once a year, Bombay once in three, Allahabad once in five years and Madras at no specified interval. Calcutta maintains a whole-time inspector. Elsewhere this work is done by committees.

The chief work of the universities consists in the prescription of courses and the conduct of examinations. Save that changes in regulations require government sanction, the universities exercise full power in these respects and can themselves settle details of courses, standards to be attained, etc., through their faculties, boards of studies and examiners.

Since 1904, the universities have possessed the power of appointing teachers and imparting instruction. Indeed, the Act makes the latter function incumbent on them. Paragraphs 150—155 show how far they have carried out this duty.

II.—Institutions and Students.

139. The number of colleges affiliated to the five universities is different *Colleges and students* from that shown in the general tables, because on the one hand their jurisdiction includes Native States and on the other some of the colleges entered in the tables are not affiliated to any university. A list of the colleges is given in supplemental table 33. The numbers are as follows.

		Colleges in British terri- tory.	Colleges in Native States.	TOTAL.
Calcutta	•	57	1	58
Bombay	•	13	4	17
Madras	•	41	12	53
Punjab	•	18	5	23
Allahabad	•	27	6	33
	TOTAL .	156	28	184.

The number of students is 28,418 in colleges affiliated to Calcutta, 8,001 under Bombay, 8,522 under Madras, 6,583 under the Punjab, and 7,807 under Allahabad.

140. The output of graduates during the quinquennium was as follows. *Output of degree-holders.*

	Arts.	Science.	Law.	Medicine.	Agriculture	Engineering.	Teaching.	Commerce.	TOTAL.
Calcutta	7,564	1,408	1,081	360	..	62	280	..	11,955
Bombay	2,607	154	701	248	105	181	..	26	4,112
Madras	3,644	..	1,274	70	..	41	..	..	5,035
Punjab	1,887	150	280	102	..	..	250	..	2,084
Allahabad	2,190	386	1,326	32	..	..	..	..	3,934
TOTAL	17,802	2,104	5,652	818	105	284	530	26	27,420

In addition to these degrees, licentiates are granted in certain subjects. Calcutta, Madras and Allahabad give licentiates in teaching; Bombay

produced 250 licentiates in medicine and surgery, Madras 200 and the Punjab 7; Bombay also produced 20 licentiates in civil engineering.

The degrees in law and teaching are what are sometimes called post-graduate degrees, *i.e.*, it is necessary to take a degree in arts or science before entering upon the course. The licentiate in teaching too of the universities of Madras and Allahabad is open only to graduates.

The output of Masters in various subjects during the quinquennium was as follows.

	Arts.	Scienco.	Law.	Medicino.	TOTAL
Calcutta	1,482	328	5	1	1,816
Bombay	353	5	10	2	370
Madras	266	..	22	..	288
Punjab	219	50	..	1	270
Allahabad	283	74	1	..	358
TOTAL .	2,603	457	38	4	3,102

The university reports include figures showing the creed and race of those who have passed the various examinations. The proportions can be judged from the table in paragraph 175, which gives this information for British provinces.

Recognised high schools. 141. The number of high schools recognised by the University of Calcutta has risen from 625 to 789, of which 626 are situated in Bengal itself. The number of pupils in these recognised schools is 227,225. This is the largest number recognised by any Indian university. There are 212 schools recognised by the University of Bombay, 153 by that of the Punjab and 284 by that of Allahabad. Only 40 schools present candidates at the matriculation of the University of Madras, as most pupils in that presidency and the neighbouring Native States take the school leaving certificate.

III.—Expenditure.

Imperial grants. 142. In 1905, the Government of India had made grants to the universities and to local Governments—the former to enable those bodies to carry out the administrative functions laid upon them by the Act of 1904, the latter to assist privately managed colleges to fulfil the new conditions required. At the end of the previous quinquennium the annual amounts of these grants to universities were as follows—Calcutta R50,000, Bombay R10,000, Madras R25,000, Punjab R10,000, Allahabad R40,000.

In 1912 and onwards the Government of India again gave grants—this time to facilitate higher teaching and research by the universities. The sums were as follows—*non-recurring*, Calcutta 22 lakhs, Bombay 5 lakhs, Madras 7 lakhs, Punjab 4 lakhs, Allahabad 5 lakhs; *recurring*, Calcutta R65,000, Bombay R45,000, Madras R65,000, Punjab R35,000 and Allahabad R45,000.

In addition to these grants the Government of India had given certain special grants—R10,000 a year for the Minto Chair of Economics at Calcutta in 1910, afterwards raised in 1913 to R13,000; R12,000 for a Chair of Economics and Sociology at Bombay, in 1915-16, which has not yet been utilised; and R12,000 for three years for a chair of Post-Vedic Culture at Allahabad, in 1914-15.

The general result is that the Government of India have continued or made the following grants during the quinquennium :—

University.	RECURRING GRANTS.				Non-recur- ing grants, 1912-1917.
	Grants of 1905 as finally revised.	Grants of 1912.	Special grants.	TOTAL.	
	R	R	R	R	R
Calcutta	50,000	65,000	13,000	1,28,000	22,00,000
Bombay	10,000	45,000	12,000	67,000	5,00,000
Madras	25,000	65,000	..	90,000	7,00,000
Punjab	10,000	35,000	..	45,000	4,00,000
Allahabad	40,000	45,000	12,000	97,000	5,00,000
TOTAL	1,35,000	2,55,000	37,000	4,27,000	43,00,000

The special grant of R12,000 to the University of Bombay is not shown in the statement sent in by that body, as it has not yet been made over to it. The special grant of Rs. 12,000 to the University of Allahabad has now ceased. The Government of Madras gave the university R20,000 on four occasions during the quinquennium for inspection and travelling expenses. The Government of the Punjab gives R21,500 a year to the local university.

In addition to these grants, large sums were allocated for the new universities regarding which proposals are pending. These have not yet been fully utilised. The Government of India also gives one lakh a year to the new Benares Hindu University.

143. In 1911-12, the income of the five universities was R20,49,301, their *Income and expenditure* R14,16,734 and the balance R6,32,567. In 1916-17 the figures *expenditure* in 1916-17.

	Calcutta.	Bombay.	Madras.	Punjab.	Allahabad.	TOTAL.
<i>Income.</i>	R	R	R	R	R	R
Government grants	3,88,385	55,000	1,03,000	87,850	99,400	7,33,635
Endowments	1,75,118	51,174	10,626	3,230	5,081	2,45,229
Fees	10,27,531	2,25,654	2,87,930	2,72,908	1,84,615	19,98,638
Other sources	2,96,399	64,377	1,10,715	30,761	27,918	5,30,170
TOTAL	18,87,433	3,96,205	5,12,271	3,94,749	3,17,014	35,07,672
<i>Expenditure.</i>						
Administration and inspection	2,53,239	71,286	1,30,483	96,055	76,879	6,27,942
Examinations	2,77,607	1,36,379	1,00,798	1,40,836	1,47,176	8,92,796
Teaching	4,45,440	14,800	66,542	92,891	52,810	6,72,483
Scholarships and prizes	20,338	33,437	7,200	23,695	5,576	90,246
Other objects	..	10,000	..	24,407	15,072	49,479
TOTAL	9,96,624	2,65,902	3,95,023	3,77,884	2,97,513	23,32,946

In general table IV the expenditure is shown as R25,51,925. The difference is doubtless due to the methods used in making up the accounts.

Income and expenditure during the quinquennium.

144. The income and expenditure during the quinquennium were as follows.

	—	Income.	Expenditure.
			R
Calcutta		82,51,340	53,27,746
Bombay		23,32,120	13,90,156
Madras		28,79,093	15,55,605
Punjab		20,61,677	19,80,815
Allahabad		20,92,674	18,39,516
	Total .	1,76,16,804	1,20,93,835

To these incomes government grants contributed in the case of Calcutta R25,32,161, in that of Bombay R7,75,000, in that of Madras R12,02,500, in that of the Punjab R8,47,530, and in that of Allahabad R9,31,000.

Change in the character of university finance.

145. The provisions of the Act of 1904, which laid new responsibilities upon universities as regards both their control of affiliated colleges and their own teaching functions, the allotment of imperial grants and (in the case of Calcutta) the receipt of two endowments of considerable value have combined to transform the character of university finance. Previously the universities had mainly subsisted upon the fees charged for examination, and this income was spent chiefly upon the conduct of these examinations, the amount saved going to swell the balances. Other sources of income are now available; administration, inspection and teaching claim a more lavish scale of outlay; expenditure has largely increased; and, while the figures still display large savings, there may at any moment be large calls for new expenditure.

IV.—General progress.

Faculties.

146. At Bombay the number of faculties remains the same, but a new faculty of science has been created which absorbs the old faculty of engineering. There was no change at Madras, but, before the end of the quinquennium, the senate had resolved to establish a faculty of science. Elsewhere there was no change.

The faculties now stand as follows.

Calcutta.—Arts, science, law, medicine and engineering.

Bombay.—Arts (including commerce), science (including engineering and agriculture), law and medicine.

Madras.—Arts and science (one faculty), law, medicine and engineering.

Punjab.—Arts, science, law, medicine and oriental studies.

Allahabad.—Arts, science, law, medicine and commerce.

Patna.—Arts, science, law and education.

Benares.—Oriental learning, Theology, arts, science (pure and applied) and law. Other faculties (such as technology, commerce, medicine and surgery and agriculture) may subsequently be added.

Under the faculty of arts provision is made in all universities save Bombay for the training of teachers and for diplomas or degrees of teaching. At the Patna University there is a separate faculty of education.

Universities and degrees.

147. The principal changes which have taken place in the courses and examinations are as follows.

At Calcutta certain changes were made in matriculation subjects for the convenience of hill tribes of Assam; and Garo and Lushai as well as Marathi, Sinhalese and Konkani were included as languages from which translation into English might be required at that examination. Matriculants who take Persian were also exempted from showing the elementary knowledge of Arabic which was previously required of them.

and which is still required at higher examinations. Syriac has been added as a subject in the Arts examinations. Changes were made in the rules regarding the appearance of candidates at the medical examinations and in the regulations governing engineering courses.

At *Bombay* the number of examinations leading to the degree of agriculture has been reduced from three to two. A degree of Master of Agriculture has been instituted. Other changes have been made. The prolongation of the period of study in engineering to four years so as to render the course more practical has been proposed but not carried out, and the previous examination has been abolished, each college now holding a First Year Arts Examination, success in which entitles the candidate to proceed to higher arts studies or to professional courses. The right of appearing at the Preliminary Science Examination (medical) has been accorded to students of other colleges as well as the Grant Medical College.

New regulations have been introduced at *Madras*. The study of languages other than English is now optional instead of compulsory. The course in law was extended to three years; but after twelve months the two-year course was re-instituted. The course for the L.M.S. degree was extended from three to four years and is now identical with the M.B. and B.S. course; the same papers are used for examination but with different percentages of marks. The engineering course was entirely revised and extended from three to four years, so as to comprise practical work. But the most striking change was in the arrangements for the honours degree and M.A. in the faculty of arts (including science). The honours degree course is now of three years and comprises English with one of nine alternative subjects. Successful candidates proceed without examination to the M.A. honours degree after the expiry of two years. But it is proposed to institute a M.A. pass degree open to those who do not take honours at the B.A.

The principal alteration in the *Punjab* University is the transfer of mathematics from a compulsory to an optional subject at the intermediate in arts. Candidates for the B.Sc. no longer read English poetry. The institution of a separate honours course for the B.A. is contemplated.

At *Allahabad* the B.A. and B.Sc. courses have been changed. A student in the former has now to take English and any two out of a list of optionals. A B.Sc. candidate takes a test in general English and one of two groups of three subjects each, both of which include chemistry.

The organisation of courses is shown in tabular form in appendix X.

148. In the last review it was observed that there was a tendency towards *Compartmental* compartmental examinations. It takes two forms—the passing of an *examinations*. examination in instalments and the re-examination of candidates who have failed in those subjects only in which they did not secure the minimum marks. During the quinquennium the intermediate at Madras was divided into two parts and a candidate who in the same year passes in one but fails in the other need not reappear in the part in which he was successful. In the B. A. honours too at Madras the examination in English is taken a year after the intermediate, while the final examination in one of the alternative courses is taken three years after the intermediate. The college test which has replaced the previous examination at *Bombay* represents a similar arrangement. In all universities examination by instalments is common in vocational courses. The *Punjab* University already had re-examination in a single subject for those who fail in the degree test and has now introduced the same rule for the bachelorship of teaching. *Madras* has introduced it for medical examinations.

149. There has also been a movement towards dispensing with attend- *College attend-* ance at college on the part of those who have failed. This condition is no *ance*. longer required at *Madras*; and in the *Punjab* University the conditions have been relaxed under which ex-students are admitted as private candidates.

150. Originally the Indian universities were not teaching bodies. The *University* Act of 1904 specified the provision of instruction as one of their duties and *teaching*. gave them the power of appointing professors and lecturers, of managing endowments and of maintaining institutions. While therefore the great bulk of the teaching is still conducted in affiliated colleges, a certain amount of higher instruction is now concentrated under university management. The activities of universities in this respect, assisted by the imperial grants, have mainly taken the form of the maintenance of colleges for ordinary instruction, the partial substitution of university for college teaching in the mastership courses, lectures of general interest and research.

(a) University colleges.

151. The University of Calcutta maintains a large law college, on which Rs 30,000 of the imperial grant is annually expended. Its College of Science, founded out of the gifts of fourteen and ten lakhs made respectively by Sir Tarak Nath Palit and Sir Rash Bihari Ghosh, is intended for post-graduate and research work. A department of experimental psychology has been opened. The University of the Punjab has a law college and an Oriental College. The latter has oriental titles classes and also provides M. A. and B. A. honours teaching. The University of Allahabad maintains its own law college.

(b) M. A. and M.Sc. teaching.

152. While elsewhere the universities supplement and assist the teaching of the mastership courses which are conducted in colleges, the University of Calcutta has instituted its own elaborate system of instruction for this grade. "The position at the beginning of the academic session 1916-17," says Mr. Hornell, "was that there were 326 M. A. and M. Sc. students in the Presidency College, 23 in the Scottish Churches College and 1,258 in the university classes. The university classes were under no system of real organisation or control, while as regards the staffs of the affiliated colleges, only those teachers who were employed in the colleges in the actual teaching of M. A. or M. Sc. classes had any share whatever in or influence over post-graduate work." In 1916 a committee was appointed by the Government of India to examine the question. The results of its deliberations have since been formulated in regulations. The chief features of the new scheme are the creation of two boards to supervise the teaching of mastership courses in arts and in science, the abolition of the arrangements for conducting these courses in affiliated colleges in Calcutta (though not in the *mofussil*, where colleges are affiliated to this standard) and the raising of the fees for appearance at the matriculation, intermediate and B. A. examinations with a view to meeting the cost of the university teaching of the mastership courses. The number of university students taking these courses has risen from 375 to 1,172 during the quinquennium and the staff employed in teaching them from 59 to 120.

The University of Bombay offers M. A. lectures in history, economics, Sanskrit, Persian and philosophy. At Lahore a university class has been opened for biology, the principal and one of the professors of the Government College being designated university professor and lecturer. The Director reports success where inter-collegiate M. A. lectures have been started.

(c) Lectures of general interest.

153. Scholars employed for the teaching of the higher courses and for research have delivered general lectures also, sometimes to popular audiences, sometimes to teachers of the subjects treated. For this purpose, cold-weather appointments have been made and professors brought out by one university have been utilised by others. Thus Professors A. Smithells, F.R.S., and Ramsay Muir, of the Universities of Leeds and Liverpool, were employed by the University of the Punjab to give lectures to senior students and to popular audiences and also to confer with teachers of the subjects they represent. Their services were similarly utilised by the University of Bombay, at which centre Professor P. Geddes, F.R.S., also gave lectures. Dr. J. H. Moulton of Manchester also held a course of lectures on Aryan antiquities at Bombay and courses were arranged there and at Madras by Mr. Daniel Jones, lecturer in phonetics at University College, London, Mr. E. H. Neville, fellow of Trinity College, Cambridge, and Mr. L. F. Rushbrook Williams, fellow of All Souls and University Professor at Allahabad. At Calcutta a number of readers were appointed for the delivery of special courses of lectures—Drs. A. R. Forsyth and H. Oldenberg, Messrs. S. Yamakami, G. F. Shirras and J. N. Das Gupta, Rai Sahib Dinesh Chandra Sen, Professor Hermann Jacobi, Mr. S. R. Bhandarkar and Professors Paul Vinogradoff and Sylvain Levi. Arrangements were made for lectures by members of the British Association returning from Australia but owing to the outbreak of the war only Professor Henry E. Armstrong, F.R.S., was able to carry out the plan. Extension lectures were instituted, mainly intended for advanced students but also open to the public, and an endeavour was made to have lectures delivered at *mofussil* colleges at the time of their inspection.

(d) Research.

154. Research has been carried on at Madras in philology and Indian history. The University College of Science in Calcutta, various chairs and

fellowships, such as the Ramtanu Research fellowship in the history of the Bengali language and literature, assist in the work of research. Professors of economics exist at Calcutta, Madras and Allahabad and a similar post is contemplated at Bombay. A considerable amount of research is reported from the universities of Bombay, the Punjab and Allahabad by professors and by students in receipt of research scholarships. The work of Sir J. C. Bose and Dr. P. C. Ray, both formerly professors at the Presidency College, Calcutta, is well known. The University of Madras awarded a scholarship at Cambridge to Mr. S. Ramanujam who has proved himself a remarkable mathematician and has been made a Fellow of the Royal Society.

155. Such are the chief objects on which grants have been expended and *Creation of* for which professors have been appointed. But this description is by no *chairs* means exhaustive and the duties of a single professor may comprise the teach- and employing of the higher degree courses, general lectures and research. A better idea *ment of pro-* of the activities of universities in this direction can be gathered from a list *fessors, etc.* of the professors employed. At *Calcutta* there are three chairs maintained by the Government of India—the Minto professorship of economics (₹13,000 a year) held by Messrs. Manohar Lal and C. J. Hamilton, the George V professorship of mental and moral science (₹12,000 a year) held by Dr. Brajendra Nath Sil and the Hardinge professorship of higher mathematics held by Dr. W. H. Young, F.R.S., and Dr. C. E. Cullis. The university maintains from its general funds a Carmichael professorship of ancient Indian history and culture (₹12,000 a year) held by the late Dr. G. Thibaut and Mr. D. R. Bhandarkar, a professorship of comparative philology held by Drs. Otto Strauss and I. J. S. Taraporewala and two university professorships of English held by Dr. H. Stephen and Mr. R. Knox. Chairs endowed by private munificence are the Tagore law professorship, to which an incumbent is annually elected by the senate; the Palit professorships of chemistry and physics (under the benefaction of Sir T. N. Palit), to which Dr. P. C. Ray and Mr. C. V. Raman have been appointed; and the Ghosh professorships of applied mathematics, physics, chemistry and botany (under the benefaction of Sir R. B. Ghosh), to which Dr. Ganesh Prasad, Mr. D. M. Bose, Mr. P. C. Mitter and Mr. S. P. Agharkar have been appointed. Messrs. Bose and Agharkar had been sent to Germany for training and are detained there. It is required under the deeds that incumbents of the Palit and Ghosh chairs be Indians. There are numerous fellowships and scholarships founded under these two endowments and under others such as the long-established Premchand Roychand research studentships and the Guru Prasanna Ghosh scholarship. The university also maintains a number of assistant professors, readers, lecturers and assistant lecturers. At *Madras* Dr. Mark Collins was appointed to the chair of Sanskrit and comparative philology; M. R. Ry. Rao Saheb S. Krishnaswami Aiyangar, Avl., to the chair of Indian history and archaeology; and Dr. Gilbert Slater, Principal of Ruskin College, Oxford, to the chair of Indian economics. A chair of Dravidian philology also was established, but, as none was found competent to fill it, five readers were appointed. It has been decided not to reappoint them after their first three years' work. At *Bombay* a large number of local scholars have been appointed as lecturers from time to time. The University of the *Punjab* has pursued the policy of bringing out European scholars for short periods. Professor A. Smithells, F.R.S., of Sheffield, for chemistry, Professor Ramsay Muir of Liverpool for history, Mr. Fournier d'Albe of Birmingham for physics, Professor J. A. Todd of Nottingham for economics, Professor D. S. Margoliouth of Oxford for oriental history and Mr. J. H. Gracey, F.R.S., of Cambridge, for mathematics. Lecturers have also been appointed. At *Allahabad* three chairs have been created, the holders of which devote themselves to the training of advanced students in methods of research work. The chair of post-Vedic studies was supported by a grant of ₹12,000 for three years from the Government of India. It was held by Dr. A. Venis. With the cessation of the grant, the chair will be abolished. Mr. H. Stanley Jevons and Mr. L. F. Rushbrook Williams, fellow of All Souls, hold the chairs of economics and modern Indian history. Readers and research assistants have been appointed in connection with these professorships.

conferment of degrees, the organisation of faculties, the award of fellowships, prizes, etc.—is vested in a senate, which though it contains representatives of the court and of the graduates, who need not necessarily be teachers, includes the principals of the colleges and university professors as well as teachers elected by the senate; and in a syndicate, two-thirds of whose ordinary members will be principals or professors. The statutes and the regulations, too, are separated, the former dealing with administration and being framed by the court, the latter dealing with academic matters and being framed by the senate.*

The Central Hindu College, handed over to and maintained by the university, forms the nucleus of the institution. An extensive site outside but adjoining the city has been acquired. The foundation stone was laid by Lord Hardinge, and the work of erection is now proceeding. For the present, instruction is carried on in the college upon its old site. Meantime the machinery of the university has been brought into being. Their Highnesses the Maharajas of Mysore and Gwalior have been declared Chancellor and Pro-Chancellor; statutes and regulations have been framed, etc. The university sustained a severe loss in 1918, through the death of the Hon'ble Sir Sundar Lal, who, as one of the principal promoters and the first Vice-Chancellor of this university and previously as Vice-Chancellor of the University of Allahabad, had done great service in the cause of education.

(b) *The Patna University.*

161. The object of the Patna University Act was to provide the new province of Bihar and Orissa with a university primarily of the residential and teaching type. But, "in view of the existence of colleges in other parts of the province and the local feeling in favour of their retention, it was decided that the university should comprise colleges situated at centres other than Patna." The scheme was first considered by a committee of seventeen members containing nine non-officials. This committee proposed a central university where six colleges (including the existing Patna, Bihar National and Training Colleges, a new government college, a new mission college, and a Sanskrit college) should be erected on a site near the capital of the province, boys resident in the city being provided for by a non-collegiate department. External colleges were for the present to be limited to four existing institutions (to the exclusion of a small college at Monghyr). Honours, mastership and nearly all the science teaching above the intermediate was to be imparted at Patna only and by the university itself. The constitution was to comprise a large convocation to deal with general questions and legislation and a council composed of the Vice-Chancellor (a whole-time officer), two *ex officio* members, the principals of all colleges, whether internal or external, the dean of the non-collegiate students, six members of the staff nominated by the Chancellor and seven persons elected by convocation. The council was to be the executive authority, with power over the staff, arrangements for teaching and examination, conferment of degrees, etc. Its decision would not be subject to revision by convocation. The capital cost of the whole project was estimated at 92½ lakhs, the recurring cost at nearly 11½ lakhs or, allowing for present expenditure, fees, etc., over 6 lakhs net. These sums included not only the erection and maintenance of institutions on the central site but also the thorough improvement and in some cases the rebuilding of the outlying colleges.

The report was published and circulated for criticism. The bill, as finally introduced by government into the Imperial Legislative Council, did not limit the external colleges to four (indeed the committee had contemplated a larger number in the future), but to institutions founded at the centres where those four colleges were situated. The constitution was modified to resemble that of the older universities— a senate of *ex officio* and 60 ordinary members, of whom 12 would be elected and the remainder nominated by the Chancellor, and a syndicate of three *ex officio*, four nominated and nine elected members. The whole-time Vice-Chancellor and the independent authority of the syndicate were retained.

Certain features of the measure met with opposition. This opposition mainly centred round the proposal that the syndicate (largely, though not wholly, professional) should exercise independent powers, the checks to be exercised by government and the limitation of collegiate centres. Fears were expressed that popular control would be minimised, that government control would be rendered over-powerful and that an arrangement, intended to group colleges at centres where academic surroundings were possible and thus to prevent the growth of weak and isolated institutions, would stem the development of higher education. Nor did other proposals escape criticism. The Act emerged from Council (shortly after the close of the quinquennium) in a modified form. The idea of a central university site just outside Patna is retained; but in place of the non-collegiate department, one of the existing colleges is to be kept up in the city as a non-residential institution. The second grade college at Monghyr is retained as a recognised institution; and, though the number of approved centres remains five (including the university area at Patna), second grade colleges may be opened without restriction as to their location and, with the sanction of the Government of India, first grade colleges too may be established at other places. An important deviation from the provisions of the Act of 1904 is that whereby government is deprived of its independent judgment regarding affiliation and disaffiliation of colleges and its power of final decision is limited to those cases which have been forwarded with the approval of the syndicate and the senate. The powers of government are curtailed in other ways also and popular control is increased. It is not expressly stated that the Vice-Chancellor shall be a whole-time officer of the university (though the first Vice-Chancellor does fulfil this condition). The nominated element in the senate is cut down to a maximum of 25 members and the elected element raised to a maximum of 50. In addition to the registered graduates, new electorates have been introduced—the teaching staff of colleges, graduate teachers of schools, associations and public bodies. The syndicate contains four *ex officio* members and 14 elected by the senate, of whom at least seven must be on the staff of the university or the colleges. Hence, while it will be preponderatingly professorial (the *ex officio* members being the Vice-Chancellor, the Director and the principals of the two chief colleges), the nominated element is eliminated from the syndicate. Moreover, the independent powers of the syndicate have been narrowed and acts done in connection with these powers may be revised by the senate on a joint reference made by not less than six members of the syndicate.*

The financial position has demanded curtailment of the scope of the scheme. The full number of colleges contemplated on the university site and the improvements proposed in external colleges are at present impossible of realisation. Still less can professional colleges be added—the failure to provide which had formed another line of criticism. Nevertheless the university has commenced operations with the facilities immediately to hand, the site has been acquired, and it is hoped, when the financial situation permits, to remove the Patna college and other institutions to their new location. As regards the ultimate shape of this university, the ideal has been foreshadowed that Patna will eventually emerge as a truly centralised university through the separation from it of the other four centres when their collegiate institutions are sufficiently strong to exist as independent entities.

162. Two other universities have commenced operations during the quin- (c) *The Mysore* quennium. In the Native State of Mysore a university was incorporated and university and commenced operations on the 1st July 1916. It comprises two colleges at the Indian Mysore city and one at Bangalore. The other is Professor Karve's Indian University for University for Women. The aim of this institution appears to be to affiliate women. various institutions for the education of women, with Poona as the centre, in the endeavour to impart higher instruction through the vernaculars. The university is private and has not sought incorporation by law.

163. Other pending schemes are those for universities at Dacca, Rangoon (d) *Schemes* and Nagpur. They have received careful consideration during the quin- for Dacca, for Rangoon and Nagpur.

*This description of the principal bodies of the university must be interpreted as referring to Rangoon and their normal constitution. The members of the first senate and syndicate were scheduled to the Nagpur. Act.

quennium. Unsatisfactory financial conditions and the desire of the Government of India that new universities should be able to profit by the recommendations of the Calcutta University Commission now sitting, have necessitated delay. The Dacca and Nagpur proposals were framed by committees and have been widely circulated for criticism. The former aims at the centralised type of university of which Benares furnishes an example. The latter would follow rather the model of Patna, comprising a group of institutions at Nagpur and outlying collegiate centres at Jubbulpore and Amraoti.

Other demands.

164. The Bombay Director says that a demand is being made in some quarters for the establishment of a local university at Poona and that Ahmedabad will sooner or later claim consideration when the redistribution of university facilities has been brought within the bounds of practical politics.

The Serampore college.

165. The Mission College at Serampore near Calcutta enjoys degree-giving rights under a treaty with the King of Denmark. Negotiations have been in progress during the quinquennium with a view to legalising certain changes desired by the Mission.

VI.—Future developments.

The Calcutta University Commission.

166. Thus two lines of development are running side by side. The old universities continue mainly, as they were in the past, affiliating institutions, though their teaching functions, especially in the case of Calcutta, are being expanded. Meantime, new universities are springing into life—some replicas of the old, but with smaller areas and with an endeavour at partial concentration round the university site; others completely centralised and primarily teaching institutions. It is recognised that university problems in India are of a far-reaching nature and that the best professional advice is requisite at the present juncture. The history of the Calcutta University Commission will belong to another quinquennium and to a future review. But it is impossible to close this chapter without some allusion to its creation. Its terms of reference are confined to the University of Calcutta, in which the characteristics of the affiliating system are exemplified in an extreme form. But the recommendations of Dr. Sadler and his colleagues will be awaited with interest by those concerned not merely with that institution but also with the others of similar type and with the new schemes which have already ripened or are nearing maturity. His Excellency Lord Chelmsford, in addressing the recipients of degrees at the Convocation of January 6th, 1917, said, "Each generation has its particular call and for you in these days, I believe the call has come to do something for the education of your country and the improvement of its material welfare. I am fully aware of the difficulties. Only the other day I asked a law student why he was taking up law with all its risks and disappointments. He answered, What else is there for me to take up? I am not going to discuss his answer, though it gives cause to think, but this I will say, it is my sincere hope and it is the policy of my government to endeavour by all means in our power to open up other avenues of employment. So long as students think that the only avenues of employment are in the legal and clerical professions, so long shall we get congestion and over-crowding in those professions with consequent discouragement, disappointment and discontent. Our policy then is first to secure that there shall be as many opportunities of a livelihood as possible opened to the educated classes and next to endeavour to divert the students into channels other than those of law and government clerical employ." In the course of the same speech he announced the creation of the Commission as a necessary preliminary to a constructive policy and his determination that its composition should ensure the consideration of educational problems with a single eye to educational efficiency.

CHAPTER VII.

ARTS COLLEGES.

I.—General.

167. Colleges are divided according to (a) the subjects which are taught *Kinds of* in them and (b) the standard to which the subjects are taught. *colleges.*

Arts colleges are those which give a general education and do not specially prepare candidates for any profession. Professional colleges are those of law (though law classes are sometimes held in combination with arts classes), medicine, engineering, teaching, agriculture, etc. These latter are treated in chapters XI and XII. Arts colleges are sub-divided into English arts colleges in which are studied the subjects of the faculties of arts and science, and oriental colleges, which sometimes teach the arts courses prescribed by the universities, with special attention to oriental languages, and sometimes offer instruction solely in the oriental classics according to their own curricula. Oriental colleges are described in chapter X. The present chapter is mainly concerned with English arts colleges.

The second line of division is into first and second grade colleges. The latter is an incomplete institution, teaching only to the intermediate standard. A first grade college teaches the full graduate course and sometimes carries instruction further to the M. A. or M.Sc. degree. The life history of the college is generally one of growth from the high school into the second grade and thence into the first grade college, at first with affiliation in a few subjects, but gradually blossoming out into more numerous courses of instruction and finally perhaps adding honours courses or even, though this is more rare, the mastership course in one or two subjects.

168. The organisation of the college system does not vary perceptibly in *Organisation* point of form from province to province. But, when the number of colleges in each province, their location and their efficiency as judged by staff and cost are investigated, considerable differences emerge in the manners in which the organisation has actually developed. Madras, Bengal and the United Provinces represent what may be called the extensive development of the system, colleges having sprung up at many and often comparatively small places. Madras, again, has numerous Mission colleges, a large number of second grade colleges and a smaller average enrolment than is found in Bengal; while in the United Provinces there is a tendency to concentration in large cities like Allahabad, Lucknow and Agra, which would seem to favour the growth of separate universities. Bombay and the Punjab represent the intensive development. Bombay has eight colleges, six of which are situated in Bombay city and Poona, while the other two are in the important centres of Karachi and Ahmedabad. Only since the close of the quinquennium has another college centre been opened at Dharwar. All the eleven colleges of the Punjab, save three, are situated at Lahore. The other provinces are less fully developed in the matter of collegiate education. The Central Provinces and Assam have each two centres, though in the former province a third is now contemplated for Berar. Burma, the North-West Frontier Province and Delhi possess two colleges each, situated in all cases at the capital of the province.

169. Of the total of 134 arts colleges in British India, 31 are managed by *Management.* government, 5 by municipalities, and 98 by private bodies. Of these last, 76 are aided and 22 unaided.

It is usual for government to maintain a well-staffed and well-equipped college in each large capital town, such as the Presidency Colleges at Madras and Calcutta, the Elphinstone, Muir Central and Government Colleges at Bombay, Allahabad and Lahore. Three privately managed colleges, the Gujarat College, Ahmedabad, the Greer Bhumihar Brahman College, Muzaffarpur, and the Morris College, Nagpur, were transferred to government management during the quinquennium.

By the Act of 1904, a college, in order to gain affiliation from a university, must be administered by a governing body. This rule applies alike to government colleges and to those managed by single individuals. It has already been stated (paragraph 92) that the experiment has been tried in Bengal of vesting substantial powers of appointment in these bodies. Mr. Hornell writes as follows, "Certain powers were, during the quinquennium, delegated to the governing bodies of government colleges. It is hoped that with a certain measure of control these bodies will prove themselves useful. There are, however, difficulties. Theoretically the greater the local interest and control the better. Actually and in particular as regards all matters connected with appointments the central office is bound, seeing that all the colleges are staffed by members of the graded educational service, to scrutinise each proposal in the light of the interests of the services as a whole. Then again it is very undesirable to derogate from the position of the principal in the matter of college discipline, as would be done if all serious punishments were not placed in his hands but in the hands of the governing body. The principals of government colleges have pointed out that they should have the power of suspending and expelling any student without previous reference to the governing bodies." There is some discrepancy of rules in Bengal regarding these last powers, which by order of the local Government, are placed in the hands of the governing body, but are reserved under the university regulations to the principal. This matter is being considered. In spite of these difficulties Mr. Hornell says that there are great possibilities for good in the system of governing bodies for government colleges.

Control.

170. Thus the internal administration of a college is under the agency which manages it, whether that be government or a private association. But the managing agency delegates powers to the governing body (unless the two bodies happen to be identical) and to the principal. As regards the prescription of courses and examinations, colleges are subject to the universities, guided by the university regulations and inspected by persons appointed for that purpose by the universities. Nor does the control of the universities end with these matters. The advisory power of these bodies in the matter of affiliation enables them to dictate to the colleges in certain domestic matters also; and, in the University of Calcutta, there are a Transfer Committee, to which students can appeal or demand a reference in case a transfer certificate is refused, and a Students' Residence Committee, which, though it cannot interfere with internal management, can report to the syndicate if the arrangement of hostels and messes contravenes the regulations; moreover, on application from a student expelled or rusticated by a principal, the Syndicate can issue orders, though before permitting him to continue his studies in another college they are required to make a reference to the principal who inflicted the punishment.

II.—Figures of institutions and students.

Figures for all India.

171. Arts colleges in British India number 134, and their students 47,135, the corresponding figures in 1912 having been 140 and 29,648. All these arts colleges are for men, save 12. Women are admitted to men's colleges but seldom seek admission. English Arts colleges of the first grade number 84, and those of the second grade 41.

Distribution by provinces.

172. The following table shows the distribution of colleges in British India by provinces.

	Number of institutions.	Number of students.	Percentage of increase or decrease of students during the quinquennium.
Madras	41	7,910	+ 69.1
Central	5	4,884	+ 51.4
North	31	15,478	+ 85.3
North-West	10	6,182	+ 11.3

	Number of institutions.	Number of students.	Percentage of increase or decrease of students during the quinquennium.
Punjab	11	4,236	+ 59.3
Burma	2	663	+ 104.6
Bihar and Orissa	7	2,575	+ 80.1
Central Provinces and Berar	4	1,094	+ 79.9
Assam	2	688	+ 133.0
North-West Frontier Province	2	177	+ 365.8
Other Provinces	5	1,244	..
INDIA	134	47,135	+ 58.9

Of the total number of students 842 are women. These are found mainly in Madras, Bombay, Bengal and the minor administrations. But the number in these last is swollen by the inclusion of some students who, though in colleges, are really in high school classes attached to colleges.

173. Twenty years ago the number of students was less than 14,000. The *Reasons for increase* was slow during the next ten years. But in the quinquennium 1907-1912 there was a sudden rise to over 29,000. The quinquennium just closed has witnessed a further increase to 47,135 students. In the past ten years the *meeting it*. number has risen from 18,918 to 47,135 and in the past five there has been an increase of 17,487 or 58.9 per cent. on the figure of 1912. Such an increase is without parallel in India. The growing number of pupils in secondary schools mainly accounts for it; it is also stated that the admission tests have been made easier. A few new colleges have been opened (the apparent diminution in the number of institutions is due to reclassification of oriental institutions) but not sufficient to relieve congestion. Hence complaints arise of inadequate accommodation and refusals to admit. As regards the latter complaints, though no doubt difficulties exist, it has to be realised that students frequently apply for admission but, when admitted, do not put in an appearance, to the detriment of others who might otherwise have been enrolled. Thus, at the Patna College in 1916, no less than 81 accepted students failed to join, with the result that the college is not working up to its full numbers. Students rejected at one college, too, often obtain entry at another. There is much confusion at the opening of the academic year, students applying to several colleges at once to ascertain the rate of fees, whether the college offers the particular combination of subjects they wish to study, whether there are vacancies, etc.

174. The average attendance is 89.5 per cent. of the enrolment. Attendance is best in Bombay (94.7 per cent.) and lowest in the Central Provinces (84.1 per cent.), Punjab (84.7 per cent.) and in the United Provinces (85.2 per cent.).

175. As regards caste and creed, the classification is as follows.

Students by communities.

	Number in arts colleges.	Percentage to male population of the community.
Europeans and Anglo-Indians	896	0.50
Indian Christians	1,391	0.10
Hindus—		
Brahmans	16,517	0.30
Non-Brahmans	21,456	0.03
Muhammadans	4,921	0.02
Buddhists	515	0.01
Parsis	573	1.30
Others	866	0.02
TOTAL	47,135	0.04

The figure for Europeans is misleading, since some of those at college are not in the collegiate stage. Among the larger communities the Brahman easily leads, though it is to be recollected that the class entitled non-Brahmans includes many castes which frequent higher institutions in very varying degrees.

The proportion in which different communities avail themselves of the opportunities of college education may also be seen from the following analysis of the examination results.

	Europeans and Anglo- Indians.	Indian Christians.	HINDUS.		Muham- madans.	Buddhists.	Parsis.	Others.	TOTAL.
			Brahmans.	Non- Brahmans.					
Intermediate pass.	57	102	2,239	12,950	737	82	66	181	6,411
Deemed pass.	34	88	1,629	1,807	403	36	70	102	4,103
Post-graduate pass.	5	18	311	364	62	..	7	11	803
TOTAL	96	208	4,200	5,151	1,202	118	143	294	11,421

These figures bring out even more strikingly the success of the Brahman community in collegiate education.

III.—Expenditure.

Total expenditure.

176. The total expenditure on arts colleges has risen from R47,98,574 to R71,03,748. The highest expenditure is incurred in Bengal, where it amounts to R18,84,996. The percentage of college expenditure to the total expenditure on education is highest in the United Provinces (7.9) and lowest in Burma (3.2).

Figures of expenditure by provinces, periods and kinds of management, etc., are given in supplemental tables 41 to 43.

*Sources from
which expendi-
ture is met.*

177. The sources from which the expenditure is derived are the following:—

		AMOUNTS CONTRIBUTED IN		PERCENTAGE TO TOTAL EXPEN- DITURE ON COLLEGE EDUCU- TION IN	
				1911-12.	1916-17.
				R	R
Provincial Revenues	.	17,49,518	27,18,764	36.5	38.3
Local Funds	.	24,850	27,915	0.5	0.4
Municipal Funds	.	33,783	43,610	0.7	0.6
Fees	.	18,43,001	32,59,969	35.4	45.9
Endowments	.	2,96,742	2,96,742	4.2	4.2
Subscriptions and other sources	.	11,47,392	7,56,748	23.0	10.0
TOTAL	.	47,98,574	71,03,748	100.0	100.0

The largest increase has been under the head of fees. But this has not been the case in all provinces. The Bombay report states that provincial expenditure has increased cent. per cent. and fees by 67.7 per cent.

178. The recurring imperial grant made for colleges during the period was R2,84,000, and some of the non-recurring grants also were applied to this object.

the Central Provinces the incidence is R65.8. In the large provinces, the lowest incidence is found in Bengal, the United Provinces and the Punjab, where it is R58.1, R75.6 and R75.8. The incidence in a government college is R78.8, in an aided college R73.5 and in an unaided college R53.3. These figures are slightly lower than the rates charged, because they are based on the fee-collections, and some students are excused, while others excuse themselves, from paying fees. The actual rates vary generally from R4 to R12 a month. Government colleges ordinarily charge a comparatively high fee, while privately managed colleges tend to charge lower fees. In some provinces a college of the latter type can charge pretty much what fees it likes; and the low rate sometimes pays by attracting large numbers. In other provinces government regulates the rate by causing aided colleges to charge a fee at a proportion of that charged in government colleges. Thus, in the Central Provinces an aided college charges a rupee less than a government college; the government rate was raised from R6 $\frac{1}{4}$ to R7 $\frac{1}{2}$ a month during the quinquennium, and the aided college rate therewith rose from R5 $\frac{1}{4}$ to R6 $\frac{1}{2}$. Sometimes however an aided college spontaneously charges higher fees than a government college. Thus, while the Elphinstone College, the chief government college in Bombay, charges R120 a year, and the two other government colleges in that presidency charge R80 and R60, the aided colleges charge respectively R102, R96 and R90. Often the fee charged in the third and fourth years is higher than that in the first and second, and the fee for the M. A. or M.Sc. classes higher still. An extra fee of a rupee or eight annas a month is frequently levied from science students.

180. The average annual cost of educating a college student varies *Average cost* greatly. The averages for the provinces, arranged in order from the highest *of a student* to the lowest are:—

	R
North-West Frontier Province	433.6
Burma	311.1
United Provinces	236.4
Assam	231.9
Central Provinces and Berar	191.1
Madras	170.4
Bombay	165.2
Punjab	158.3
Bihar and Orissa	152.6
Minor Provinces	150.6
Bengal	102.1
India	151.8

The average for India is R151.8 and the average cost to public funds is R59.6. In a government college the average cost is R256.2 and the cost to public funds R173.6; in an aided college R143.6 and R35.6; in an unaided college R70.5 and *nil*. The cheapest college is the unaided college in Bengal, where the average cost is R55.6, while a case of a college in that presidency is cited where it is only R25.

IV.—General developments.

181. The most noticeable point in the preceding section is that the institutions which impart the bulk of university education in India are conducted *Grant-in-aid and scale of expenditure.* at an average cost of about £10 per student, and in many cases much less. In government colleges the cost is about £17. In aided institutions, in which the majority of students read, the cost is about £9 $\frac{1}{2}$.* In unaided colleges it is less than £5.

* In England and Wales the cost of a student is as follows:—at the University of Birmingham, £71, at Liverpool £58, at Leeds £55, at Manchester £50, at the University of Wales £47, at Bristol £42, at Sheffield £21. In some of these cases the calculation excludes important items of expenditure; e.g., the cost of the Manchester Municipal School of Technology. In some other English universities, the cost is less, owing to the presence of a considerable number of evening or part time students. But at Oxford the cost is £104. In Scotland the cost is £78.7 at St. Andrews, £40 at Edinburgh, £34 at Glasgow (where, however, the figures of expenditure are incomplete), and £33 at Aberdeen. These figures are taken from the Report of the Commissioner of Education, Washington, for the year ended June 30th, 1916, pages 680-681, and refer to the year 1913-14. The comparison with India is complicated by the presence in English Universities of students who are not undergoing full collegiate courses and further by the difference in the values of money.

The privately managed college is ordinarily aided by means of a fixed grant, calculated upon the difference between the resources of the institution in the way of fees, interest or endowments and subscriptions, and the income which will maintain it in reasonable efficiency. During the quinquennium the amount thus disbursed as aid from provincial revenues has risen from R4,82,110 to R7,97,349. But this increase has not even served to cover, so far as average expenditure is concerned, the great enhancement of numbers. The cost of a student in an aided college has actually declined by nearly R10, while that in colleges of all kinds has declined by nearly RS. The result is that colleges are under-staffed, that this feature has become more marked during the past few years and that reasonable efficiency is regarded as conformity with an inferior standard. This has a marked effect upon instruction, which is aggravated by the fact that many of the students during their earlier years have not emerged from the stage of attainment proper to a school and find difficulty in grappling with university courses and methods.

The college staff.

182. The staff in government colleges ordinarily consists of members of the Indian, provincial and subordinate services. As an example of the proportion, it may be stated that, out of 191 professors and lecturers in such colleges in Bengal, 26 belonged to the first, 90 to the second and 68 to the third of these services, while 7 held outside posts. In privately managed colleges it is usual to employ M.A's and M.Sc's of Indian universities, if possible with a high class in honours; B.A's with experience are also appointed; occasionally men without degrees are found—there are 62 such among the college teachers of Bengal, probably all of them teachers of oriental classical languages. Some of these colleges appoint European principals and occasionally a few European professors. Sometimes, as at the Dayaram Jethmal Sind College at Karachi and the Khalsa College at Amritsar, government makes an arrangement to lend members of the Indian Educational Service and contributes to their pay. Mission colleges are staffed by Europeans and Indians, the former being often honorary or quasi-honorary workers. In the colleges managed by Roman Catholic Orders such workers are numerous. St. Joseph's College at Trichinopoly has 25 European priests on its staff.

183. A problem which has arisen during the quinquennium is that of the performance of the growing administrative work in colleges. This ordinarily falls upon the principal. The question was first raised in reference to the Presidency College at Madras and entailed a reference to other local Governments and to the Secretary of State. It was generally felt that the principal should not be regarded solely as an administrator, but that his duties should include some teaching, as this brings him into close touch with students. At the same time it was realised that he is often overworked and various ways have been suggested of lightening his duties. At the Presidency College, Calcutta, two of the professors have been invested with the functions of bursar and dean in addition to their ordinary duties. They receive allowances in consideration of this work, which is intended to relieve the principal of routine and free him for general supervision and teaching.

Limitation of classes.

184. The question of the staffing of colleges engaged the attention of a sub-committee of the Conference of Directors in January 1917 and has formed the subject of a reference to the University of Calcutta.

The Universities of Calcutta and Allahabad prescribe a limit to the number in a class or a section of a class to which one professor may lecture—150 in the one case and 60 in the other. At Allahabad this appears to be a matter of rule or practice, not of regulation. The other universities lay down no limit, though it is understood that in the Punjab an intermediate class is divided if it exceeds 100. This matter is further discussed in paragraph 186.

Proportion of students to staff.

185. A more important question is the proportion of students to professors which will admit of the proper discharge of the work of a college—that is, not the mere delivery of lectures, but tutorial work, the correction of essays and exercises, the guidance of studies, seminar and laboratory work and the general supervision of the various activities which should make up college life. In England and Wales, the proportion is 10 students to each professor of a staff (this includes a number of part-time students). In Scotland 16,

in Ireland 8, in France 21, in Germany 15, in Austria 16, in Japan 12, in Australia 13, in Argentine 10.* In India the figure is 22 students per instructor. This figure is further analysed below.

	NUMBER OF STUDENTS PER INSTRUCTOR IN				
	Government Colleges.	Municipal Colleges.	Aided Colleges.	Unaided Colleges.	All Colleges.
Madras	14	9	16	10	16
Bombay	20	..	31	24	27
Bengal	19	16	29	40	30
United Provinces	20	..	16	19	17
Punjab	22	..	21	42	27
Burma	21	..	10	..	18
Bihar and Orissa	14	..	27	9	18
Central Provinces and Berar	16	..	31	..	20
Assam	18	..	..	..	18
North-West Frontier Province . . . . .	..	..	8	..	8
Minor Administration | . . . . .	14	..	17	..	16
TOTAL	18	11	21	34	22

Personal investigation of the staffs of a number of colleges shows that, within these averages, there is considerable variation. Under the same university a government college is found with a proportion of 15 students and a privately managed college with a proportion of 50.

Various opinions have been expressed regarding the proportion which should be observed. In 1906 the University of Calcutta appointed a small commission to inspect *mofussil* colleges. It considered that a proportion of one to 15 between staff and students should be regarded as the lowest which is compatible with efficiency. The Dacca University Committee proposed a proportion of one to $13\frac{1}{2}$; the Patna University Committee proposed one to 12 in the university and constituent colleges (exclusive of special departments, the training college and external colleges); the Central Provinces and Berar University Committee proposed one to about 10 in Nagpur itself and one to 14 in external colleges.

186. Meantime there is no denying the fact that Indian colleges on the *Methods*. whole are understaffed. This affects the life and instructional work.

It is difficult for the staff to know the students personally. Too often the professor delivers his lecture to a class of anything up to 150 or 200, without knowledge of their names, far less of their abilities, and then sees no more of them till the next day. The Government of Madras passed orders just after the close of the quinquennium that each student should be assigned to a member of the staff, who would see him periodically and discuss his general welfare and studies.

Many hold (and perhaps justifiably hold) that the only limits for a class to which a formal lecture is being delivered should be fixed by the size of the room and the carrying power of the professor's voice. But this is a very different matter from tutorial work, which is regarded as the proper complement of lectures. Any tutorial system of studies is impossible with inadequate staffs. This is recognised in several of the reports and the introduction of such a system is regarded as a counsel of perfection. Personal enquiries have elicited the opinion from one principal that owing to increase of numbers there is no room for tutorial classes, from another that the poverty

* Report of the Commissioner of Education, Washington, for the year ended June 30th, 1916, page 688. The figures are generally, but not always, for 1913-14. Other sources of information have been consulted. In some cases the calculation is made difficult by the presence of part-time students and of part-time lecturers.

of the students prevents the institution of any adequate system. As a result, the method ordinarily pursued is one of lecturing, which frequently includes the dictation of notes. This is unsuitable for intermediate students, who are at a stage where teaching, not lecturing, is required, and who, one is often assured, cannot properly understand the lectures. It also renders difficult the application of university methods to more advanced students, who require guidance rather than direct instruction.

187. Attempts are indeed made to introduce tutorial systems. Often they prove valueless—the hours devoted to the work are too few, the batches (from 30 to 80) are too large; sometimes the lesson resolves itself into the writing of a composition; sometimes low paid and ill qualified teachers are employed as so-called tutors.

In science teaching tutorial work is largely supplied by laboratory instruction; and here and there, where circumstances permit, a more thorough method of training in arts subjects has been introduced. Some examples are given.

In the Elphinstone College, Bombay, the work of the first year, which is essentially a continuation of school work, is conducted so far as possible in small classes; pupils are expected to prepare lessons beforehand, frequent questions are put to the class and written work is constantly supervised by the teacher. The whole class receives four general lectures in English a week and is also divided into three groups of forty students, each of which receives four hours a week of tutorial instruction, which is carried on largely by question and answer and aims at testing knowledge, eliciting opinion, correcting misunderstandings and generally training the intelligence. The same class is again divided for essay work into ten groups each of twelve students. The whole class writes a weekly essay and the tutor in charge of each of these groups occupies two hours a week in interviewing the students who compose it. Finally, monthly test papers are set to each group by the tutors, and the professors prescribe occasional home work or exercises which are corrected and returned in class. In the second year class the method is rather similar but less detailed. Tutorial work is regarded as inapplicable to the pass B. A. class. But a form of seminar has been established for the honours class. The professor has collected a library of reference books in his room, of which the students have compiled a catalogue and act in turn as librarians. With the help of this library, the students collect material for essays on subjects which will encourage original judgment and elementary research. But even here it is impossible similarly to treat the other subjects of the curriculum.

There is a seminar system at the Muir Central College, Allahabad. A class is divided into groups of five or six students. As often as possible the teacher of the subject concerned takes each group in some topic connected with the course. Sometimes the title of an essay is given and suggestions called for as regards treatment and heads. These suggestions are discussed and finally a scheme is drawn up. In this way the students are encouraged to think the matter out for themselves and then shown individually where their methods fail.

The tutorial method is firmly established in the Punjab colleges. Group meetings are held for discussions, recitations, etc., and the tutor acts as general mentor and supervisor.

The Patna College is in the happy position of possessing a staff which allows one professor to about every 12 students of the average enrolment. An elaborate system of tutorial work has been arranged. Each student in the intermediate arts classes has, in addition to lectures, two tutorial periods in English and one in each of his other subjects a week. Even when the classes are at their maximum limit the groups will not exceed 12 in the first and 15 in the second year. In the B. A. classes the groups are still smaller. Science students are similarly treated. In economics each student receives half an hour's individual instruction weekly. The principal has expressed himself as alive to the danger that these periods of tuition may degenerate into a monotonous system of exercises or mere lectures resembling those delivered to a full class, but he trusts that the system will develop into one of directed and supervised study, teaching the student how to work and remedying the habit of memorising books. As the result of experience, he considers, that the knowledge of English has improved, that students can follow lectures more intelligently and express themselves more correctly and that the staff are better able to judge the industry and ability of individuals.

Some of the classes of the Robertson College, Jubbulpore, have a good system, but the Director says that the proportion of students to teachers must be reduced before further progress can be made.

Director observes that the buying of books seems to have no place in the students' budget—a regrettable fact, since university education should mean more than the mastery of a few text-books.

188. It is sometimes urged against professors in Indian colleges that they are academically undistinguished and produce no original work. Yet they of original number among their ranks not a few whose attainments would be considered high in any country; and a case recurs to mind where a small college, with a mere handful of professors, possesses two fellows, one of an Oxford, the other of a Cambridge, college, as well as other distinguished scholars. Nor, even were it true that no original work is produced, would this be a cause for surprise, when the burden of instructional work, let alone other activities in the college, makes so great a demand upon the time of a staff incommensurate to the numbers it is expected to teach. Mr. Richey points out that such criticisms do scant justice to a professor—whose surroundings are quite different from those which prevail in an English university. The organisation of games and societies, hostel superintendence, library management, tutorial supervision, university work, and outside duties connected with schools, committees and public libraries keep him fully occupied. "It is at least arguable whether a life spent in such useful activities, many of which will bring him into close personal relationship with his students, is not more valuable in a society where higher education is a new and rapidly expanding phenomenon than a life devoted to research." This question, as here treated, is distinct from the questions whether more original work ought to be attempted and achieved in the colleges and whether the pay offered is sufficient ordinarily to attract professors of sufficient general attainment.

189. Mention has already been made of the expansion of the hostel system *Corporate life.* for college students. In some provinces it has been most successful and some parents whose sons could attend from home are said to prefer their residence in hostels because of the good influence which it exercises. Other means are used to promote corporate life and common interests. In Calcutta (where residential arrangements are defective) the University Institute, used for social gatherings of students and their elders, acquired a fine building of its own during the quinquennium, to which the Government of India contributed. In the well-managed colleges throughout India there is now an *esprit de corps* and a vigour of life which contrast refreshingly with the languidly laborious existence which less favourably situated students still endure. Athletics, literary, debating and scientific societies, and the production of magazines are usual features of college life, taking to some extent the place of general reading, which, says Mr. Richey, has not the same attraction for Indian as for English youths. Occasionally social service movements are formed and the Khalsa College at Amritsar has a students' co-operative society, which supplies books, school equipment and food.

190. Among college buildings the most remarkable constructed during *Buildings.* the quinquennium have been the Islamia College, Peshawar, and the Robertson College, Jubbulpore. Both illustrate the type of college removed from the cramping influences of the city. The former has a site of 300 acres along the Khyber road, on which handsome blocks for arts and science classes, hostels and a high school have been erected. The latter has nearly 150 acres of ground four miles from the city and forms a self-contained group, on a picturesque site, with residential quarters for the whole of the staff and the majority of the students. Science buildings have been erected at several colleges, notably a fine laboratory at St. Columba's College (a mission institution) at Hazaribagh in Bihar and Orissa, and a well-equipped physics and biology block at the Government College, Lahore.

V.—*Education in colleges, etc., in the United Kingdom.*

191. Many Indians now resort to Europe and some to America and Japan, *Indian* as State scholars or as private students. Some mention of them may be *students in* included not inappropriately in this chapter. A considerable amount of *the United* dissatisfaction was expressed during the period regarding arrangements in *Kingdom.* the United Kingdom for Indians who go to study there. The Students Department had come to be regarded by many of those for whose benefit it was created

schools. The number of scholarships was increased. It remains to convert district council schools into government institutions. This will complete the essentials of an arrangement which was intended to mark the limits of direct responsibility on the part of government, and, while expanding government activity up to those limits, to give greater facility for local and private effort to undertake further expansion. In the *North-West Frontier Province* municipal schools were taken over by government and funds were thereby set free for the development of elementary education by the municipalities.

In *Bombay*, the *United Provinces* and the *Punjab* schemes aiming for the most part at the improvement of the prospects of teachers were largely carried out during the previous quinquennium. Further developments have been along the lines then laid down.

211. There are left *Bengal*, *Bihar and Orissa* and *Assam*. In *Bengal* the number of secondary schools and pupils is very great. In those provinces (especially in *Bengal* and *Assam*) secondary education is run at a remarkably cheap rate. Finally, they were affected by the territorial redistribution of 1912. These causes have combined to delay action. In 1908 a committee had met in *Calcutta* and had formulated extensive schemes for the schools situated in these areas. The main features of the scheme were, as regards government schools, the provision of posts in the provincial service for headmasters of high schools (save at divisional headquarters, where there would be headmasters in the Indian educational service), the inclusion of teachers of English and classical languages in the subordinate service and the formation of a vernacular teachers' service; and, as regards privately managed schools, the increase of grants so as to bring a larger number of institutions upon the aided list and to raise the maintenance of a standard aided high school (*i.e.*, one with single-section classes) to Rs 40 a month and of an aided middle English school to Rs 15 a month, one-fourth of the additional cost in the former case and one-third in the latter being met from private sources. The schemes were calculated to cost 16 lakhs recurring for *Bengal* (which then included *Bihar* and *Orissa*) and 10½ lakhs for *Eastern Bengal* and *Assam*, as well as large capital sums. The Government of India criticised the cost involved and the large part which it was intended to assign to government in the financing of privately managed institutions; and they held out no hope of assistance from imperial funds. The local Governments accordingly made minor changes in the schemes; and, as no money was available, the matter rested there. The policy of imperial grants afforded hope that something at least might be accomplished; and in 1912 the local Governments were invited to resubmit their proposals as modified in the light of the administrative changes. The government of *Bihar and Orissa* was the first to respond, with a scheme calculated to impose on government an additional annual outlay of Rs 3,86,000. This was sanctioned by the Secretary of State and a beginning has been made, principally in the increase of grants to privately managed schools. The government of *Bengal* submitted their scheme in August 1916. It provides for an increase of provincial expenditure amounting to Rs 11,80,020 a year. It had not yet been sanctioned when the quinquennium closed. Both these schemes were amalgamations and adaptations of the schemes proposed in 1908, with only slight modifications. The Administration of *Assam* went further. First, it was decided to transform high schools at sub-divisional headquarters into government institutions, to enlarge government high schools by the opening of additional sections, to encourage the establishment of middle English schools in order to relieve the pressure on the lower classes of high schools, to increase grants-in-aids, etc. In pursuance of this scheme, eight sub-divisional schools were provincialised and a ninth (already a government institution) was raised to the high standard, the double-section system was introduced wherever required in government high schools, and the list of aided high schools was enlarged. At the same time some improvement of staff was effected along the general lines laid down in 1908. Second, an exhaustive scheme was submitted in 1916 to the Government of India. Among its principal features are the reorganisation of the subordinate service and the regularisation of posts already created for new government high schools, the opening of additional high schools, the financing of middle English schools by government, a more liberal provision for scholarships and the experimental

The percentage of trained teachers to the total number of teachers was 24.4 in 1914-15, and in 1916-17 it was 25.0. The percentages vary from 1.3 in Bengal to 58.8 in the Punjab, 63.6 in Madras and 86.2 in Burma.

215. Among points of special improvement to be noted are the following. In Madras the staffing of the lower forms and of incomplete secondary schools has improved, but the qualifications are still unsatisfactory. It is rare to find a graduate teacher in a form below the fourth. In Bombay none but graduates are now appointed as teachers in government secondary schools. In the Punjab the percentage of trained teachers has risen from 54 to 65, and the rate of pay which they can command shows that their presence is now considered necessary on the staffs of privately as well as publicly managed schools. In the Central Provinces graduates are employed with very few exceptions in the high departments and matriculates or holders of the school leaving certificate in the middle; the percentage of trained teachers has risen from 11 to 24.

The training of teachers of oriental languages is admittedly defective and their ignorance of English is sometimes a handicap. Their pay is often very low and their methods stereotyped and old-fashioned.

The teachers of vernacular in secondary schools are generally men who have gone through the usual vernacular training institutions. It is remarked in Assam that matriculates and others with inferior qualifications had been occupying these posts and that the substitution for these of trained vernacular teachers is an improvement.

216. The staff in government schools has benefited from the improvements effected in the various services (see paragraph 129). In the resolution of 1913 the Government of India laid it down as the general policy that a graded service for teachers of English was desirable, with a minimum salary of Rs 40 and a maximum of Rs 400. Among some of the improvements effected in different provinces are the following.

The minimum pay of assistant (exclusive of special) masters in *Bombay*, raised from Rs 30 to Rs 40 in 1912, has been further raised to Rs 50. The grant of local allowances of Rs 50, Rs 30 and Rs 20 to headmasters and assistant headmasters and mistresses in *Bengal* has already been mentioned in paragraph 129. In the *Punjab* a Bachelor of Teaching ordinarily commences on Rs 75 to Rs 90 in the subordinate service, the possessor of a senior Anglo-vernacular certificate on Rs 55 to Rs 70, and the possessor of a junior certificate on Rs 35 to Rs 50. In *Burma* the old scale existing in schools taken over from municipalities has been found insufficient; an improved scale has been framed but want of funds has prevented its introduction. In the *Central Provinces* the average pay has been raised from Rs 65 to Rs 85. Undergraduate teachers begin on Rs 40 and graduates on Rs 60, both rising (the former by grades and the latter by a time-scale) to Rs 125, while 40 posts of Rs 150 to Rs 250 are reserved for special merit. The *Madras* report states that classical and vernacular teachers are the worst paid members of the staff though the grant of subsidies has now enabled the publicly managed schools to increase their pay to Rs 20 rising to Rs 40.

(a) in government service.

217. The pay of secondary teachers in private employ is apparently lowest in the United Provinces and Burma (Rs 25.5). But the average is lowered in those provinces by the large number of middle vernacular schools, where teachers are naturally paid less than in Anglo-vernacular schools. It is highest in Delhi (Rs 57.2). In Bombay, the North-West Frontier Province and Baluchistan it is between Rs 48 and Rs 49; in the Central Provinces and Madras between Rs 40.5 and Rs 42.4; in the Punjab and Ajmer-Merwara between Rs 37.7 and Rs 38.1. In the eastern provinces it is low—Rs 31.3 in Bihar and Orissa, Rs 29 in Bengal and Rs 28.6 in Assam.

Improvement has undoubtedly taken place, largely as the result of the imperial grants; but it is often improvement upon an impossibly low scale. It is reported from the *United Provinces* that, thanks to more liberal grants, the pay in aided schools now approximates more nearly to a living wage. In the *Punjab*, a Bachelor of Teaching can obtain from Rs 100 to Rs 150 in an aided school, a holder of the senior Anglo-vernacular certificate from Rs 80 to Rs 100; and a holder of the junior certificate from Rs 40 to Rs 60. In the aided schools of *Burma* pay tends to approximate to the rates on which government gives half salary grants—namely Rs 80 to Rs 140 for middle school teachers and Rs 140 to Rs 300 for high school teachers, with charge allowances of Rs 20 and Rs 40 to headmasters of middle and high schools respectively. The average scale in middle English schools of *Bihar* and *Orissa* has risen from a range of Rs 4 to Rs 64 to a range of Rs 5 to Rs 100; the lowest rate (an exceptional one) still seems strangely inadequate. The average

to introduce a provident fund scheme but in district cess schools, municipal schools and aided vernacular schools some of the teachers' posts are pensionable. In Bihar and Orissa apart from the teachers employed by large zamindaries (who render pensionable service) and those in railway schools only 68 private employees are reported to subscribe to funds. In the Central Provinces only 45 out of 427 secondary teachers so subscribe, in Assam only 25 teachers of unaided schools and none from aided schools.

Courses.

220. The importance of the subject of courses demands a separate section. The following features may be noticed. An attempt has been made to render curricula more realistic and practical. Thus, in Bombay, science has been added to the course as a regular subject and its teaching improved by the provision of special teachers and laboratories, drawing is compulsory in certain classes, sloyd has been introduced in certain schools and history and geography courses have been brought up to date. The development of school leaving certificates has favoured elasticity of courses. Science is compulsory in all the high schools in Madras and in the Madras matriculation, and optional in the matriculations of the Punjab and Allahabad. It is also a compulsory subject of study, though not of examination, in schools preparing for the Bombay matriculation. It is an optional subject under the various school leaving certificate schemes. Only in the provinces whose schools prepare for the Calcutta matriculation is science excluded from the curriculum, the nearest approach being elementary mechanics, which is an optional subject.

System of grant-in-aid.

221. A summary of the grant-in-aid systems was given in appendix XII of the last review. The systems fall under several general classes, of which the following are the chief.

(i) The amount may be assessed on the income from private sources. In *Madras*, it equals the income from endowments and subscriptions, exclusive of that from fees, and is diminished by any sum spent on scholarships or on meeting the difference between the standard and the actual rate of fees. In *Bengal* the grant may be equal to half, or in some districts two-thirds, of the income from private sources, inclusive of fees. A set of revised rules for the western and the eastern districts is under contemplation.

(ii) The grant may be a fraction of the total expenditure. In *Bombay* it is a third; the necessity of raising it to four-ninths has been admitted; but the war has prevented the change. (The grant may also be assessed at one half of the income from local sources.)

(iii) The grant may be a definite sum, differing for different classes of schools, or a capitation grant, or a mixture of the two. In the *United Provinces* it comprises a fixed grant of Rs 750 a year for the high section of a boys' school, Rs 400 for the upper middle, Rs 250 for the lower middle and Rs 150 for the upper primary; and a capitation grant of Rs 3 per head a year. But it may not exceed the private income inclusive of fees, or one-half of the expenditure, or the difference between expenditure and private income.

(iv) The grant may be partially determined by the condition of the school—i.e., the difference between private income and a reasonable expenditure, or the qualifications and pay of teachers. The new system in *Bihar* and *Orissa* permits the grant to equal the difference between private income and Rs 535 a month in the case of a high school or Rs 160 in that of a middle school. Similarly in *Assam*, according to new rules made during the quinquennium, a fixed scale is prescribed for the number, qualifications and pay of teachers, provision for free studentships, sports, contingencies, etc.; and the difference between this and the fee income at government rates determines the amount of grant. Subscriptions are not regarded in this calculation, but are placed to the credit of the school balance. One of the systems pursued in *Burma* is the ordinary grant—i.e., the difference between income and expenditure, the income being taken to include fees at government rates, grants for technical subjects, salary grants, etc. The salary grant in *Burma* is given for certificated teachers. It may amount to one-half the salary paid subject to a maximum of Rs 150 per teacher. As a matter of fact such grants in *Burma* ordinarily equal three-eighths of the salary. The system introduced into the *North-West Frontier Province* makes the grant contingent on the difference between the fee income calculated at standard rates and a standard scale of maintenance. In the *Punjab* staff grants are given; they were raised during the quinquennium from a fifth to a third of the salary.

(v) Sometimes a fixed grant is given, based on the grant earned under various systems for the past three years. This system is coming to be largely employed in Anglo-vernacular schools in *Burma*.

Several provinces permit of special concessions for schools recently started. Generally, too, the grant is liable to some increase or decrease according as the school is found to be good or poor in point of instruction, discipline, etc.

languages. Bombay prescribes a rigid course of six subjects with no optionals.

English and mathematics are compulsory in all matriculations. The study of a classical and of a vernacular language is compulsory at Calcutta and Bombay. History and geography form a compulsory subject everywhere save at Calcutta, where they figure as two optionals. Elementary science is compulsory at Bombay and Madras and optional elsewhere, save at Calcutta, where science is not prescribed. Drawing is admitted as an optional in the Punjab and Allahabad universities, agriculture at the Punjab and elementary mechanics at Calcutta.

Matriculation examinations are conducted by means of written papers. During the quinquennium the Bombay university dispensed with the examination in certain subjects, but the plan has not been successful (see paragraph 228).

(ii) *School final examinations.* 224. The growth of school final examinations was described in the last review. Tests of this nature have existed in India in one shape or another since 1888. They are intended to encourage variety of courses and to supplement the external examination by school records and oral and practical tests.

In *Madras* the subjects of the course leading up to the school leaving certificate are grouped as follows:—‘A’ subjects (English, vernacular and elementary mathematics) in which all are examined; ‘B’ subjects (history, geography, science, etc.), which all schools are supposed to teach but in which no examination is held; and ‘C’ subjects forming a long list of specialised optionals in which examination is held. The examination is conducted by a board, which contains ten members, of whom five are officials and five are non-officials; four of these members are nominated by the university—a new arrangement introduced during the quinquennium; the Director is president. The school record forms an important item. All pupils, whether they pass in the examination or not, receive certificates, the value of which can be judged from the record and the marks. This examination admits to the university and has practically ousted the matriculation. As all candidates receive a certificate, the discretionary power of admitting them to colleges rests with the principals. Owing to the abuse of this power, the university now issues lists of those deemed eligible for admission based on a specified minimum percentage of examination marks in certain subjects. The course for the *Bombay* school final examination is similar to the Bombay matriculation, save that science and a classical language are not compulsory. It admits to government service but not to university courses. The course for the *United Provinces* school leaving certificate examination consists of English, mathematics, the history of India, geography, a vernacular and one optional. The board consists of the Director, the registrar of examinations, five members appointed by government, two nominated by the university, one by the Chamber of Commerce, and one member of the staff of the Thomason Civil Engineering College at Roorkee. The school record, written examinations and an oral and practical test (held at each school by selected examiners) combine in determining the result. A pass qualifies for government service and for admission to university courses. The examination is popular and in 1917 the number of candidates exceeded those at the matriculation. The Anglo-vernacular high school final examination in *Burma* is conducted by the department. Hitherto terminal marks have not been calculated. But a two-years’ record is now to be made and sent to the Director. No numerical marks are given at the examination; the candidate simply passes or fails. A pass qualifies for government service and also, if taken in all compulsory subjects and two optionals (one of which must be Pali or mathematics) for admission to the Calcutta University courses. The Director considers that this involves an undue restriction of choice. Here also, in 1917, the number of candidates exceeded those for matriculation. A majority of candidates take both examinations. In 1913 a committee framed a scheme for *Bihar* and *Orissa*, but it has been postponed pending the establishment of the Patna University. A school final system was introduced in the *North-West Frontier Province* during the quinquennium; it is recognised for admission to the Punjab University. A scheme was drawn up for *Ajmer-Merwara* in 1914 and was recognised by the University of Allahabad; but, owing to the lack of adequate inspecting staff, its introduction has been postponed.

An important incident of the period has been the consideration of a form of examination in Bombay and the Punjab which should be conducted by a joint board representative of government, the university and other interests. The arrangement would differ from the systems in Madras and the *United Provinces* mainly in giving greater prominence to the university. In Bombay it would supersede the present dual system.

13,946 students enrolled in the 1st year of arts colleges. Nor is the influence of the examination confined to pupils of the high classes. Mr. Südmersen says that the evil of early specialising affects the lower classes of the school. Thus, despite a certain choice of optionals, the examination has a narrowing effect on the curricula of schools. Little or no attention is paid to subjects, however important, unless they figure in the matriculation course. The effect of this is particularly marked where, as at Calcutta, history and geography are not compulsory and science not even an optional. Still more serious is the effect upon the general life of a school, the methods pursued, the discipline and the tone. For none of these things count in a purely external examination. One of the Punjab inspectors says, "The pass-percentage fetish and the university examiners' demand for brief answers in set forms continue to hold their sway over the teacher and the taught." Hence cram and the use of keys are encouraged. Prescribed text-books are begun too soon. Mr. Hornell, speaking of books issuing from the Calcutta University press, says that teachers have attempted to introduce these books in the high schools at too early a stage, and that unfortunately the texts hitherto issued have been seriously defective. One of the Bengal inspectors says that "it is notorious that the matriculation, as it is held now, is lowering the standard of education in high schools." Another writes, "It is felt throughout that the matriculation certificate is not a proper test of the intelligence and capacity of the candidates and that still less is it a test of the quality of the teaching given." Mr. Südmersen speaks as follows.

"The matriculation examination affords no test of the power of the candidate to understand spoken English, and its test of the power of writing English is very unsatisfactory. The low percentage of pass marks required enables a boy to get through in English in spite of bad spelling and composition, and this is the case too in mathematics, where a knowledge of the four elementary rules with a memory retention of a few propositions in Euclid will secure a pass. The memorising of a few passages of translation and of a few stock answers in grammar will enable him to satisfy the examiners in Sanskrit."

The result produced by the fact that recognition for matriculation remains the chief aim was observed in a previous report from Bengal. So long as this is the case, advice on teaching methods or suggestions of improvement are not likely to receive due attention.

Such are some of the main comments made in the reports. Yet another comment is the large scale on which these examinations have now to be conducted in respect of numbers both of candidates and centres. The number of Calcutta matriculation candidates in 1916-17 was 16,088, and the number of centres 52. The valuing of so large a number of papers presents grave difficulty. The danger of leakage grows with the scale on which the test is conducted. Just about the close of the quinquennium, during the summer of 1917, twice in succession the Calcutta matriculation papers leaked out and the examination had to be held a third time under the conduct of an officer lent at the university's request.

- 228. Criticisms of the school final certificate have for the most part been aimed at two peculiarities of the system in Madras—the granting of a certificate to every candidate and the list of important 'B' subjects on which no examination is held. Neither of these characteristics is essential to the preservation of the principles which underlie such systems. The acceptance of certificates, without examination of their contents, as evidence that the holders are fit to pursue a university course, will be remedied by the minima of examination marks laid down by the university and the inclusion of its nominees upon the board. The fact that no examination is held in such subjects as science, history and geography has led to their neglect. Mr. Stone, however, is against their inclusion in the examination and hopes that other means which are being taken will work improvement—especially the threatened withdrawal of recognition from schools which neglect the subjects or fail to take them into account when promotions are being made. At the same time there is no doubt a decided feeling in India against taking the teaching of subjects on trust. Thus, the important change made in 1913 in the Bombay matriculation, whereby vernaculars, science and geography were omitted from the list of examination

have retained the middle English examination. The Government of Burma considered that a test which qualified for certain grades of government service should continue to be a public examination and that it was necessary to keep a uniform check on admissions to higher stages. The examination has survived in Ajmer-Merwara also. The abolition of the middle English examination is condemned by some practical educationists who date from it a steady deterioration in the quality of high school work.

VI.—Methods

Science.

231. Perhaps the most important change in method has been the improvement of science teaching. This subject is compulsory for the Bombay matriculation, though not as an examination subject, and for the few who take the Madras matriculation; and it is taught in schools which take the Madras school leaving certificate course. Bombay has now an inspector of science teaching; and effective instruction in this subject dates from the last four or five years. A curriculum, text-books and teachers' manuals had first to be prepared. The subjects thus treated were studies of matter and life for the lowest classes, then physiology and nature study, then physiology and hygiene, then physics and hygiene, then physics and mechanics and finally chemistry and first aid in the highest class. The next thing was to plan and build laboratories and design furniture. The supply of suitable apparatus made (as the inspector considers essential in the interests of economy) in India, is still under consideration. As to the object of the instruction given, the inspector says that the amount of knowledge of physics and chemistry acquired by the Indian school boy cannot be very valuable in after-life; so these subjects are regarded as purely educational. A knowledge of hygiene, on the other hand, is regarded as an end in itself, while physiology explains its facts. Nature study is intended to increase the power of observation, stimulate interest and increase knowledge. As to method, individual practical work has been made the basis of the scheme. A list of simple, inexpensive and definite little experiments was drawn up, for performance by each boy. Then came the final step necessary for the starting of the scheme—the training of teachers for instruction in science, which was carried out at four centres and is reported to have been very successful. The whole scheme has hitherto cost over Rs5,000 capital and nearly Rs4,000 recurring for laboratory expenses.

Action has been taken elsewhere to render science more practical. Practical tests were made compulsory for the Madras school leaving certificate in 1914 and for the United Provinces certificate in 1909. The teaching of science in the Punjab high schools is based on experiments. Altogether the position of science in schools has entirely changed since the Universities Commission of 1902 made their unflattering report upon it.

English.

232. The direct method of teaching English has been introduced on a large scale, especially in Madras, Bombay and the Punjab. In the first of these provinces it is complained that the method is not well employed by teachers of the lower classes, that grammar is neglected and that questions are couched in bad English. In the United Provinces, the direct method may be used only by competent trained teachers.

Mathematics.

233. Mathematics, like English, is often poorly taught in the lower classes. The Madras report speaks of carelessness, lack of method and untidiness; so long as the answer is correct, the teacher does not mind how it is obtained.

History and geography.

234. The teaching of history and geography suffers from the teacher's habit of lecturing and the pupil's of taking a mass of notes. History lessons, too, are often treated as though they were merely English lessons. An inspector in the United Provinces considers that wider reading is required on the part of the teacher to enable him to make the subjects more vivid; and that correlation between them is unknown.

Handwriting.

235. Writing receives little attention. One of the Bombay inspectors remarks that slovenly writing is still far too common. "I attribute it in part," he says, "to the use of rough note-books, in which boys scribble all day long, and I have tried to suppress them." In European schools, on the contrary, writing is particularly good and the work in these schools "is usually a revelation."

tion of English, especially as the university does not recognise the vernacular as an alternative medium of expression at the matriculation. Only about 10 per cent. of the candidates at the school final examination have chosen the vernacular for examination purposes, and though it seems probable that questions are better answered in the vernacular, the data at present hardly permit of a definite conclusion. During the quinquennium the vernacular was made the medium throughout the middle classes for all subjects save English in the United Provinces, the Punjab and the North-West Frontier Province.

General remarks.

238. On the whole, reports indicate that methods of teaching have improved during the quinquennium. But much remains to be done. The teacher, even when trained, is inclined to talk too much and make his pupils do too little. Interest is not sufficiently aroused, systems of marking or place taking are little employed, accuracy and neatness are not emphasised.

VII.—Wastage in schools.

Wastage.

239. Now that figures of the pupils enrolled in different classes are available for 1912 and 1917, it is possible by a calculation of the probable figures for the intervening years, to form a more accurate estimate than formerly of the process of wastage in schools. The figures of Anglo-vernacular schools however are not distinguished from those of vernacular in general table X, and there is a certain amount of overlapping in the middle stages. It is better therefore to adopt the figures of a single province, where the high school classes can be accurately distinguished. Bengal has been selected for the following illustration. In that province there are four high school stages. This is advantageous, since it enables a clear comparison to be made with the results of an enquiry into the same subject in the United States of America, made by Mr. E. L. Thorndyke and Mr. L. Bevier.* This comparison is instructive. The numbers of students who proceed in subsequent years to the higher classes and the examination results are given as percentages of the number of those who enter the high school stage in a single year.

		Class I.	Class II.	Class III.	Class IV.	SUCCESSFUL AT FINAL EXAMINATION.
American schools.	.	100	63	44.4	30	not stated
Bengal schools	1911-12 Entries	100	107	101	109	32
	1912-13 do.	100	102	89	96	35
	1913-14 do.	100	93	82	89	39

In America there is a violent drop after the first year in the high school, which Mr. Thorndyke regards as most unsatisfactory and as evidence that a large share of the fault of elimination lies with the kind of education given. Other possible reasons for this early decline in numbers are the discovery that the pupils are unable to face the course or that the parents desire to put them into some form of vocational education. Whatever be the cause, it is clear that a number of children are removed from the high schools of America at an early stage. In Bengal on the other hand not only is such removal rare but in the years 1913, 1914 and 1915 the numbers in classes 2, 3 and 4 (the highest class being denominated 4) are actually greater than those who entered class 1 in 1911-12. The reason for this is that classes beyond the first are swollen by those who fail to get promotion in previous years, although the tendency to refuse promotion would seem to have decreased in a remarkable manner in the succession of years beginning 1912-13 and 1913-14. In America the numbers are reduced to 30 per cent. by the time the highest class is reached. In India there is no substantial reduction throughout the high standard and it is left to the examination (easy as it is admitted to be) to weed out anything from 60 to 70 per cent. of the pupils.

* The Elimination of Pupil's from Schools, by E. L. Thorndyke, Bureau of Education, Washington; and The Educational Review, June, 1915.

(ii) *Effect of external examinations.*

243. In the second place, there is still in some provinces the numbing influence of the matriculation. This affects the school in several ways. The majority of schools in such provinces still, as Mr. Hornell remarked in an earlier report, acknowledge no law and submit to no supervision, or guidance other than that which the matriculation imposes on them. It is impossible that a syndicate sitting in Calcutta should control 789 schools distributed over an area of 78,699 square miles. Rules become relaxed, orders are evaded and the influence of the inspecting staff is weakened. Again, those effects are produced which have already been observed in connection with the curriculum and the method of treating it which is inevitably adopted when the sole end in view is the passing of a maximum number of pupils through an external examination. Nor is it only the curriculum which is narrowed. Scant attention is paid to those activities which ought to form so important a part of the pupil's environment. At a time of life when action is natural and essential to well-being the boy is forced into sedentary application to a course which often makes little appeal to him and in mastering which he receives but little assistance, while his chief recreation is frequently the perusal of highly spiced newspapers. Mr. Mayhew says, "What impresses the careful observer most unfavourably is the limitation of the school horizon, the lack of suitable interests and the general dullness of school-life. The schoolboy has few hobbies and is stung to alertness only by a reference to examinations or local politics. There is no reaction to the mention of Indian names renowned for industrial enterprise, administrative ability, scholarship or sport. But a reference to any well-known political leader seems to arouse in him the spirit of romance and adventure which is so natural to boyhood and is only awaiting absorption in a more appropriate sphere." Finally, owing to the arrangement whereby the high school course leads up to a test which is designed to be the portal to a higher stage of instruction, the school tends to lose its proper place in the organisation. What is wanted is a course both of studies and of other activities sufficiently broad to suit the temperament of different boys in the higher stages and to fit all not merely for further studies but also for a career. Instead of this the matriculation, as remarked by Mr. Südmersen, is a point of departure rather than a terminus. High school education comes to be regarded as a preparatory stage rather than as an end in itself. This condition of things reacts not only on the schools but also on the colleges. Mr. Hornell has suggested that it is essential to the university as a place of higher education that it should abandon as soon as possible all work which is not both by its nature as well as in its standard the proper work of a university. The work of the schools should be widened and their standard raised so as to relieve the earlier stages of the college. When this has been done, continues Mr. Hornell, the school final stage would almost certainly come to be regarded as the point on the educational ladder at which boys go off not only to clerkships but also into lower grades of specific professional training. A system is required which will prepare for life and not only for a matriculation examination.

244. When this has been said, it is necessary to reiterate the fact that there has been improvement and that in many places schools will be found where a healthy training is imparted. This is particularly to be observed where a better scale of pay has been given to teachers, play-grounds have been provided and games organised and a rational system of school leaving certificates has been introduced.

Orissa also a modest commencement has been made with the establishment of board schools. In 1911-12, there were only 109 such schools in the province. There are now 318 as against 16,085 aided and 5,628 unaided.

It will be observed from paragraphs 265 and 267 that in these two last-named provinces surveys have been or are being undertaken and that in Bengal the establishment of board schools has formed an integral feature of a more thorough and equitable distribution of institutions. One of the chief advantages of board schools is that they can be established where required, whereas (says Mr. Jennings) a teacher in search of a stipend is not likely to start a school in a backward area, where he will get little from the fees, when he can open a school near to one already in existence and attempt to draw pupils away from it.

Committees.

248. The attempt is generally made to constitute managing or visiting committees for primary schools. This can more easily be done where the system is one of board schools, but is difficult where schools are private ventures. In Bombay such a committee generally consists of the village headman and a few others and its work is to enlist sympathy for the school, secure attendance and check any vagrancy on the part of the master. Under the new circle scheme in the United Provinces, Circle Committees have been appointed. Though it is early to judge, the opinion seems to be that they are not of much value save where definite duties are assigned them. The formation of such committees is laid down in the Assam Local Self-Government Act of 1915. Mr. Südner says that they have not yet been able to rise above factious contentions and that any interest manifested in the school is the outcome of personal antipathies rather than of educational enthusiasm. "The burning down of the school house and thefts of school material are not unknown results of village factions and the school *pandit* is often by no means unwilling to take a prominent part in the maintaining of these feuds." In Bengal and Bihar and Orissa, where the aided system prevails and the few board schools which exist are a novelty, such committees generally exist only in name.

II.—Figures of institutions and pupils.

Figures for all-India (primary schools).

Distribution of boys' schools.

Average enrolment compared with increase (boys' schools).

249. The total number of primary schools in India for boys and girls, has risen from 123,578 to 142,203 or by 15 per cent., that of pupils in them from 4,988,142 to 5,818,730 or by 16½ per cent. There are 124,081 boys' schools with 5,188,411 pupils, and 18,122 girls' schools with 630,319 pupils. The figures for boys' schools are elaborated in supplemental tables 85, 86 and 89.

250. There is one boys' primary school for every 4.3 towns or villages, as against 5.3 in 1911-12. The number of towns or villages per school varies from 1.9 in Madras to 9.9 in the United Provinces and 10.6 in the Central Provinces (see supplemental table 87). But, as remarked in the last review, owing to differences in the organisation of villages, this calculation offers a defective criterion of distribution. One boys' school serves 8.3 square miles (see supplemental table 88). If educational institutions of all sorts be taken, the number of square miles so served is 5.4. There is one educational institution for every 1,266 of the total population, and one boys' primary school for every 1,005 of the male population.

251. The average number of pupils in a boys' primary school (see supplemental tables 90 and 91) is now 42 as against 41 in 1911-12. (If girls' schools be included, the average enrolment is 39.) It is interesting to consider this in connection with variations in the number of schools and in the percentage of pupils under instruction. The following table brings these points together.

	Average number of pupils in a boys' primary school.		Percentage of increase or decrease in average number.	Percentage of increase or decrease in total number of boys' primary schools.	Percentage of increase or decrease in number of pupils in boys' primary schools.
	1911-12.	1916-17			
Madras	39	43	+10.2	+20.1	+30.9
Bombay	58	59	+1.7	-16.9	-15.2

Figures for all India (pupils in primary stage).

254. Hitherto the figures given have dealt with primary schools, mainly those for boys. It is clear however that such figures do not represent the total undergoing primary instruction. Pupils in primary departments of secondary schools should be added; and there are also, as has already been remarked, a certain number who receive such instruction in elementary private schools which teach a vernacular. The total thus arrived at is as follows:—

	Boys.	Girls.	TOTAL.
In primary stage of public schools	5,288,708	1,115,492	6,404,200
In elementary private schools teaching a vernacular	325,925	17,976	343,901
TOTAL	5,614,633	1,133,468	6,748,101

The total in 1911-12 was 6,007,196. In that year pupils in 'other public schools' were included. This is an uncertain figure; and one of the advantages of the reclassification of *maktab*s and *pathshala*s already alluded to is that it largely dispenses with the necessity for this heading in the computation of children undergoing primary education. The increase during the previous quinquennium under these heads had been about 1,300,000 pupils. In the present quinquennium it has apparently been only just over 740,000. But in 1914-15 some 300,000 pupils of Native States were excluded from the returns. If allowance be made for the proportion of these who would naturally be in primary classes, it will be found that there has been an increase among primary pupils amounting to over a million. In British India 2.8 per cent. of the population are undergoing elementary education, namely 4.5 in the case of boys, and 3.5 in that of girls.

Distribution by provinces (boys in primary stage).

255. The number of boys undergoing elementary education in the different provinces, the percentage of increase or decrease and the percentage on the total male population are shown below.

	1911-12.			1916-17.			Percentage of increase or decrease.	Percentage of boys undergoing elementary education to the total male population.
	Boys in Primary stage of public schools.	Boys in elementary private schools teaching a vernacular.	TOTAL.	Boys in primary stage of public schools.	Boys in elementary private schools teaching a vernacular.	TOTAL.		
Madras . . .	867,951	62,612	930,563	1,118,620	57,630	1,176,256	+26.4	5.77
Bombay . . .	635,953	29,350	665,312	534,010	11,238	545,252	-18.0	5.31
Bengal . . .	1,203,599	3,842	1,207,441	1,302,952	2,582	1,305,534	+8.12	5.58
United Provinces . . .	509,808	40,850	550,254	656,551	30,446	686,997	+24.9	2.80
Punjab . . .	239,330	17,635	256,965	300,211	15,883	325,094	+26.5	3.01
Burma . . .	177,150	166,150	343,300	244,555	177,721	422,276	+23.0	6.82
Bihar and Orissa . . .	597,251	24,715	621,966	605,632	25,696	631,328	+1.5	3.74
Central Provinces and Berar . . .	259,337	..	259,337	282,012	41	282,053	+8.8	4.06
Assam . . .	146,325	415	146,740	177,570	450	178,020	+21.3	5.13
North-West Frontier Province . . .	20,826	572	21,398	31,816	464	32,280	+50.0	2.73
Minor Administrations . . .	3,981	..	3,981	25,764	3,779	29,543	..	3.84
INDIA . . .	4,601,101	346,150	5,007,257	5,288,708	325,925	5,614,633	+12.1	4.50

The decrease in Bombay and the apparent lack of progress in Bihar and Orissa are due to the exclusion since 1913-14 of the figures of certain Native States—a change which has affected the figures in other provinces as well, though not to the same extent. If the figures of Bombay Native States be excluded for 1911-12, the increase in primary schools in that presidency is 951 and of pupils in primary stages 63,125. The report from Bihar and Orissa points out that in some districts the increase has not been continuous and that some actually show a decline during the last year of the quinquennium. Among the reasons assigned for this, it is stated that, when increased rates of stipend were sanctioned for teachers, a number of venture schools were encouraged to start operations, but closed down when

Sources from
which expen-
diture is met
(primary
schools).

258. The sources from which the expenditure on all primary schools is derived are the following.

		Amount contributed in		Percentage to total direct expenditure on primary schools in	
		1911-12.	1916-17.	1911-12.	1916-17.
		R	R		
Provincial funds	.. . . . .	45,28,767	68,90,307	21.8	23.5
Local funds	.. . . . .	61,03,477	1,12,61,915	30.0	38.4
Municipal funds	.. . . . .	16,04,424	27,41,030	8.2	9.4
Fees	.. . . . .	42,20,990	47,73,769	20.4	16.3
Endowments	.. . . . .	38,78,487	4,67,972	18.7	1.6
Subscriptions, etc.	.. . . . .		31,69,163		10.8
		TOTAL	2,07,26,145	100.0	100.0

The increase in the amount spent from local funds is largely due to contributions made from provincial revenues supplemented, as these have been, by imperial grants. The lessening of the proportion borne by fees is a matter for congratulation.

Imperial
grants.

259. The increase in expenditure is largely due to imperial recurring grants given for primary education, amounting to 66 lakhs. Non-recurring grants were also given for this purpose.

Fees.

260. The average annual fee for a pupil in a primary school for boys is shown by provinces, periods and different kinds of management in supplemental tables 107 to 109. The present average for Indians for the whole of India is 14.5 annas. The sum is highest in Bengal (R1.7), and lowest in the Central Provinces (annas 0.9). In the North-West Frontier Province and Assam primary education is free. The average annual fee in a school under public management is 7½ annas, in an aided school R1.2, and in an unaided school R1.4. Further information about fee rates in different provinces and the remission of fees will be found in paragraph 298.

Average cost
of a school
and of a
pupil.

261. The average cost of a boys' primary school and of a pupil has been shown by provinces in paragraph 257, it is shown by periods and by different kinds of management in supplemental tables 102-103.

The average cost of a boys' school is R202.8, varying from R557 in Bombay to R117 in Bengal and R112.2 in Bihar and Orissa and from R553 in a government and R368.6 in a board school to R143.7 in an aided and R61.6 in an unaided school.

The average annual cost of a pupil in a boys' primary school is R5.0, varying from R9.3 in Bombay to R4.9 in Madras and R3.5 in Bengal. The cost of a pupil to public funds is R3.6.

IV.—General developments.

Main objects
of policy.

262. The objects to be aimed at in fostering elementary education are the provision of facilities within easy reach of every child and the continuation of the child's education to a stage at which he may be regarded as permanently literate.

(i) Expansion.

263. When the circumstances of the quinquennium are considered, the increase of pupils, though smaller than could be desired, compares not unfavourably with the preceding period.

Surveys.

264. It is important, both for the general increase of literacy and for ensuring that facilities are not confined to certain communities, that the expansion of primary education should proceed upon a definite plan. The action taken towards this end in three provinces is described below.

schools for the small children serving, so to speak, to connect the central schools with one another. It is indisputable that such schemes should result eventually in placing education within the reach of all and increasing the number of pupils. Whether they will accomplish the equally important task of inducing boys to proceed to the higher classes is more problematical.

(ii) Continuation of studies.

269. For whatever limited success may have attended the efforts to make elementary instruction more widespread, no solution has yet been found for the equally important problem presented by the early abandonment of studies, although such a solution is one of the objects of the schemes just described. The figures of distribution of boys over the various stages of elementary education in both primary and secondary schools are as follows.

	Total number in each stage.	Percentage to total in	
		1911-12.	1916-17.
Boys in upper primary stage	588,207	12.5	11.1
Boys in lower primary stage reading printed books* . .	3,295,831	62.1	62.3
Boys in lower primary stage not reading printed books* . .	1,401,667	25.4	26.6
TOTAL . .	5,288,703	100	100

In a period when increase has been large, a disproportionate number in the lower classes need cause no apprehension. But the year 1916-17 closed a period during which expansion was slightly less than in the preceding quinquennium, and yet it shows a rather less favourable result than was attained in 1911-12. Regarding this—the greatest crux in the whole question of elementary education in India—further remarks are made in the sections on the school course, the education of those in employ and school age and literacy.

Qualifications of teachers.

270. Apart from a very small proportion of government employees the teachers in primary schools are either in board, municipal or private employ.

Out of 219,667 teachers in primary schools 65,818 are trained. The distribution is as follows.

	Total number of teachers.	Number of trained teachers.
Government schools	3,313	2,034
Board and municipal schools	82,770	40,667
Aided schools	115,725	21,855
Unaided schools	17,859	1,212
TOTAL . .	219,667	65,818

The percentages of trained teachers to all teachers in primary schools of different provinces are shown in the foot note.† Among the larger provinces, the Punjab and the United Provinces give the best figures, with 52.2 and 40.6 per cent. Bengal comes last with 15.7 per cent.

The general qualification which admits to training is ideally the middle vernacular certificate, and this is coming more and more to be the reality; though there are many teachers who have passed only the upper primary standard. In Bengal there are still a number of teachers, amounting to 10.2 per cent. of the whole, who have passed only the lower primary examination.

* The phrases 'reading' or 'not reading printed books' are misleading if literally interpreted. The Indian parent does not believe his child is properly at school till it possesses a book, however elementary. The second category may be taken as indicating the rudimentary stages—mainly the lowest infant class.

† Madras 36.2; Bombay 37.8; Bengal 15.7; United Provinces 40.6; Punjab 52.2; Burma 18.2; Bihar and Orissa 20.7; Central Provinces and Berar 32.2; Assam 38.4; North-West Frontier Province 37.8; Coorg 62.5; Delhi 51.8; Ajmer-Merwara 26.6; Baluchistan 53.0; Bangalore 47.0; India 29.9.

scale varying in accordance with the qualifications of the *guru* from R2 to R7 as minimum. The committee which discussed primary education in that province advised a scale for trained teachers of R7 to R12 but government desired R9 to be regarded as the minimum, save in special cases. The Director puts the average total emolument at about R7·6—namely, R3·6 in an unaided school, R8·8 in an aided school and R13·9 in a board school. In the *Central Provinces* the position of board school teachers has been greatly improved by the rule that the service of all certificated men shall be pensionable—a reform which involves a minimum salary of R11. The pay of all uncertificated teachers has been raised to R8. An average cadre pay rising from R15 to R19 has been fixed as an aim to be attained as early as possible. The average pay in the case of government, board, municipal and aided schools has risen from R14, 11·2, 13·1 and 9·8 to R20, 12·9, 14·5 and 10·4, respectively. In *Assam* the annual emolument in a board school has risen from R8·9 to R10·7, that in a privately managed school from R9·6 (aided) and R2 (unaided) to a general average of about R8·8 (nearly R12 in an aided and R4·7 in an unaided school). In the *North-West Frontier Province* the average monthly pay in board, municipal and aided schools has risen from R11·5, R16·5 and R13·1 to R12, R20·8 and R15·2. A decline has occurred in unaided schools. An elementary teachers' service has been instituted and a time-scale from R14 to R20 has been decided on. In *Delhi* the minimum pay of a qualified headmaster is now R18 and that of an assistant R15.

Though the pay of teachers in some provinces is still poor enough, the solid improvement which has taken place during the quinquennium is one of its most satisfactory features. When set forth in detail, the increases seem small. When regarded in bulk, they constitute a reform involving heavy expenditure. The large inequalities noted are due partly to economic conditions, partly to differences in the educational systems.

Emoluments in addition to pay.

272. The pay shown above is supplemented in various ways. In many privately managed schools and even in some board schools the teachers are allowed to take the fees. Occasionally some limit is prescribed of the amount which may thus be appropriated.

The primary school master is sometimes also the branch postmaster and as such draws an allowance, generally from R2 to R10 a month. Such cases however are not very numerous; 640 are reported in Madras, 673 in Bengal, 199 in Bihar and Orissa, and in the Punjab one-sixth of the total number have this additional employment. The arrangement is a convenience to the villagers and a help to the ill-paid teacher. It is apt slightly to interfere with school work, but only in villages where postal work is heavy.

Cattle-pounds, sanitation and cattle-registration are sometimes entrusted to village teachers; the allowance for a pound is R1 to R2 a month, and that for the other duties from R2 to R3 $\frac{1}{2}$.

The Bengal report discusses the question whether the primary teacher receives gifts in kind and presents in money, and concludes that in urban areas he does not receive these things nor yet free board and lodging. In rural tracts too the custom has died out or is dying, though occasionally non-resident *gurus* get house and food. Sometimes however the teacher receives grain and, on marriages and other auspicious occasions, presents of clothing, etc.

Pensions, provident funds, etc.
(a) *In board and municipal service.*

273. The practice of permitting board and municipal teachers to render pensionable service or to subscribe to the regular provident funds established by those bodies is increasing. In Bombay and the Central Provinces such teachers render pensionable service. In Bihar and Orissa they can contribute to the board provident funds, and 704 do so; the same privilege is accorded by most of the local boards and municipalities of Assam, and 220 teachers are contributing. In all these cases the privilege applies to those in receipt of pay over R10. In the United Provinces contribution is generally compulsory for teachers on R10 or over and sometimes teachers on smaller pay are allowed to contribute. In the North-West Frontier Province teachers on R10 or over are required to contribute to the board or municipal provident fund; the number of those so subscribing is 649. In Delhi 159 teachers contribute to the fund. The contribution under these funds is generally one anna in every rupee of the employee's pay, to which the local body contributes either an equal amount or half.

(b) *In private employ.*

274. The teacher in a private primary school is in a particularly unfortunate position as regards provision for old age. He is not ordinarily eligi-

states that the manager of vernacular schools has had to rely mainly upon fees which varied very widely according to the locality and upon grants which, so long as they were calculated on the results, might be greatly decreased by causes over which the teacher himself had no control, such as outbreaks of cholera or small-pox or local floods. This points to the desirability of substituting for results grants something of a more permanent nature. The maintenance grant dependent upon the number of pupils in each stage (upper and lower primary) combined with salary grants paid on the qualifications of the staff is consequently coming into greater favour. The second instance was Assam where though there was no regular results grant system the amount of assistance earned by a school was partly fixed and partly dependent upon the class in which each pupil was studying. It has now been decided to abolish this capitation system (which obtained both in upper primary schools, which in that province are generally aided schools, and in lower primary schools, which are practically all board or municipal schools); and the rule under which a certain amount of local subscription was required has also been abolished. It is worth while in speaking of Assam to observe that this and Bihar and Orissa are probably the only provinces in which lump grants are given to associations which manage a large number of schools.

In Bihar and Orissa grants are given according to the qualifications of teachers—a trained teacher gets Rs9 a month, one who has passed the middle examination Rs6 a month, one who has passed the upper primary Rs8 a month, others Rs2 a month. The new rules for the North-West Frontier Province prescribe a maintenance grant comprising Rs8 a month for a school with an average attendance of 40 pupils and, in a school with more than 40 pupils, Rs12 a month for every certificated teacher, and Rs8 a month for every uncertificated teacher.

The principal change has been the abandonment of results grants where they still obtained. Capitation or attendance grants frequently vary in rate according as boys are in the lower or the upper primary section of the school. But this hardly amounts to a capitation system in the sense in which it existed in Assam—especially in view of the fact that a very large number of schools have no upper primary classes at all.

The total amount given from public funds as recurring grant-in-aid to privately managed primary schools increased by Rs25,98,495 to Rs64,12,204 and the amount thus given per pupil in aided primary schools for boys was as follows.

	Rs		Rs
Madras	2.3	Bihar and Orissa	2.3
Bombay	2.6	Central Provinces and Berar	3.9
Bengal	1.4	Assam	2.7
United Provinces	2.7	North-West Frontier Province	3.5
Punjab	3.3	Other provinces	3.9
Burma	2.6	India	2.0

In addition to this, there are capital grants given for buildings and equipment.

Buildings and type plans.

277. It has already been stated that much progress has been made with buildings. Nevertheless, this subject raises various difficult and even contentious questions. Some would have no buildings for primary schools at all, others would depend on hired buildings. The advocates of special buildings adapted for school purposes are perplexed by the large number to be provided and the difficulty of discovering a type which will not render the total cost prohibitive. Other questions arise regarding the advantages of fairly costly *pukka* buildings on the one hand and cheap buildings demanding constant repair on the other; also regarding the agency to be used for construction.

In Madras only 41 per cent. of the schools are held in buildings of their own. In Bombay the villagers sometimes give houses rent free and adapt them to school purposes; and here, as elsewhere, *chardis*, *dharamshalas* and temples are frequently used. The Punjab report deprecates the open shelter or shady tree as unsuitable to a climate where dust-storms are not infrequent and the variations in temperature are extreme. In Assam the school buildings are declared to be satisfactory. They are very simple buildings consisting of one long room, with mud floor, walls of the local reeds which there provide so excellent a building material, thatch roof and mat doors and windows.

It was found to impose too great a tax upon teachers; and a simplified curriculum, restoring the use of text-books, was substituted during the quinquennium. Elsewhere, if there has been alteration, it has been on a small scale. In *Burma* a special course has been adopted for boys who are unlikely to go beyond the fourth vernacular standard. The revision of text-books in some provinces has been of importance, especially in the *Central Provinces*. In that province, too, a more general revision is being worked out, with a view to emphasising the rural side of the work, hygiene, first aid, etc.

280. The curricula aim at instilling a knowledge of the 3 R's. Other subjects are added, with a view to imparting a modicum of knowledge in geography, etc., stimulating thought and observation, and placing the pupil in possession of some practical ability in things which will be of material use to him. A few examples may be cited.

In *Madras* no subject is, strictly speaking, compulsory. The vernacular, space and number work, general knowledge, drawing, singing and physical exercises are recommended for all schools together with the inclusion under one or other of these heads of such knowledge as is particularly necessary for agriculturists; instruction may also be given in English, geography, civics and Indian history, nature study and elementary science, Hindustani or any south Indian vernacular. In *Bombay* the course comprises the 3 R's with Indian accounts, history and geography, object lessons in the lower and science in the higher standards (with drawing in both), with kindergarten methods and story telling in the infant classes and lower standard, drill, gymnastics, etc. In western *Bengal*, besides the 3 R's, drawing and modelling, nature observation, hygiene, poetry and simple geography in relation to actual surroundings are prescribed. Drill, hand and eye training, drawing and further arithmetic and observation work are optional. In the *United Provinces* the subjects are the 3 R's, simple geography and observation lessons with drawing, the reading of leases and patwari's papers in manuscript, account keeping and letter writing. In the *Central Provinces* this utilitarian aspect of the course is still further emphasised.

The differences between curricula for rural and for urban schools are slight and tend to disappear. The main difference now consists in the objects offered for observation lessons. Second languages are attempted only in *Madras*, where English, Hindustani, etc., may be taught, in the *Punjab* and the *North-West Frontier Province*, where Persian is sometimes taken and in *Burma*, where Pali is studied in monastic schools. Formal agriculture is not taught; but the attempt is generally made to impart an agricultural tinge to the education in rural schools, by insistence on plant and animal life observation, the couching of arithmetic questions in terms of agricultural produce, and sometimes the teaching of land records.

Determining factors in the courses.

(a) Methods.

281. The problem of primary courses is largely determined by the answer to two questions—What is the teacher able to teach? What is the pupil ready to learn?

282. The history of courses in India is an adjustment between the limitations of the teacher and the exigencies of a syllabus which shall not be too jejune. The average elementary teacher possesses neither the knowledge nor the professional skill to do much more than instruct in the 3 R's—often by conventional methods which would not commend themselves to modern ideas. The following passage occurs in a report from *Madras*—a province where training is well advanced.

"It is not pretended that no advance has been made, but a brief reference to the methods of teaching adopted and to defects commonly met with will force the conclusion that there is much scope for improvement. In number work, merits are that greater attention is paid to mental work, that the training in the earliest stages is made more concrete and that a more practical turn is given to the teaching by homely illustrations and by exercises in local bazar transactions. The main defect is a neglect of space work. Insufficient attention is paid to writing both in the early stages and later when unsuitable copy books are introduced, used wrongly and corrected by faulty methods. As to reading and text-books, in the worse schools it is sometimes found either that the pupils have no books or that all in the same standard have not the same book. Vernacular poetry is unsatisfactory, as often the teachers and nearly invariably the pupils do not understand the passages in their texts. Reading is not nearly as free and fluent as it should be and much more practice in both oral and silent reading is required. Geography is on the whole better taught. More realistic methods are employed, relief maps and other apparatus are used and in not a few schools the causal relation between, e.g., the local rainfall, soil and crops, is brought out. Civics is taught in a large

